



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

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PROFIT IN FLAXSEED.

From the expression heard from farmers almost every day, one can readily learn the value of the flax crop to the agricultural interests of our state. With a crop running from twelve to twenty bushels per acre, and our oil mill company paying \$1.30 per bushel for all they can get, the

that more flax be raised. Next year will likely see a much larger acreage sown.—*Mankato Register.*

RUINS OF WELLS' ELEVATOR.

In our November issue we published a short item regarding the burning of the Wells' Elevator at Buffalo,

WHEAT TO STORE.

There is considerable wheat picked up now to ship out to other points, says the *Minneapolis Record*, where the grain is to go into store to earn storage for the empty elevators. As there is a wide difference now between the prices of the near and distant futures, there is a rich field



RUINS OF WELLS' ELEVATOR AT BUFFALO, N. Y.

profit of the land sowed to flax is much greater than from any other crop. This crop brings hundreds of thousands of dollars to the farmers of the West every year, and instances are not rare where men who had struggled along for years with wheat and other crops, making little financial progress, have grown comfortably well off by sowing largely to flax. So long as flax is imported to this country the farmers need not fear an over supply of the crop. The Mankato linseed oil mill has been one of the greatest blessings to the farmers of Southwestern Minnesota that they possess, and it has always been the companies' desire

N. Y. With this issue we are enabled, through the courtesy of the *Roller Mill*, to present to our readers an illustration of the ruins of this structure, which originally appeared in the *Illustrated Buffalo Express*.

The Wells' Elevator, which was the property of the Western Elevating Company, was located on Buffalo Creek. Over 250,000 bushels of corn, together with other grain, were destroyed with the elevator.

The Hessian fly appeared in a number of districts of Kansas during the last of November.

in it to work. The money paid receivers, heavy interest and the storage too, is paid for at a high rate. There is no better security possible for money to be loaned on than wheat in store. It has the right to demand cash difference in case of depreciation, while with proper insurance against fire there can be no safer loan.

When you think of an invention which you intend to patent, avoid showing it until you have secured your patent. Many valuable inventions have been lost to their designers by a lack of prudence in this regard.

WHEAT CULTURE IN IOWA.

A correspondent of *Country Gentleman* says: Wheat culture in Western Iowa has been thoroughly revolutionized in the past two decades. Twenty-two years ago, when I first came here, the method of putting in wheat (spring) was slovenly in the extreme to one coming here from a state where success was obtained only by the good husbandman who practiced the very best methods of culture. The farmers here raised bountiful crops of spring wheat upon prairie sod that had been broken in June previous to the spring when sown, by merely harrowing lightly once, and sometimes twice, after the seed had been sown broadcast. Many instances are known where good crops have been raised among cornstalks, where the only work done to the ground was running a stalk-cutter over the field after sowing.

Several years ago B. F. J., in an article in your columns, attempted to account for, or explain why, spring wheat failed in Illinois, but I am not fully persuaded whether it was due to climatic changes or soil robbery, but believe both to have effected it. Spring-wheat growing has been abandoned with us, and winter wheat cultivated in its stead. Very hardy varieties have to be obtained, else failure follows. The varieties that will stand our climate and soil at present are Turkish, Little May and Golden Cross. Many of the old, reliable sorts grown in Ohio and Pennsylvania cannot be grown here. I had this season Turkish, Little May, Michigan Amber and Mediterranean, of which the two latter varieties winter-killed.

There is one thing requisite to the successful growing of winter wheat in this part of the United States that can hardly be accepted by the farmers who have been so long engaged in slipshod farming, and that is that it requires a firm seed-bed well prepared, and that it should be drilled. Press drills are preferable to the hoe drill for this soil.

I sent Director R. P. Sheer, Experiment Station Agricultural College, Ames, Iowa, four bushels of Turkish wheat, of which he says the following regarding his experiments:

"Last fall I sowed seven varieties of winter wheat broadcast in a corn field, where no weeds had been allowed to grow. The wheat was covered with a five tooth cultivator and a common hoe. The names of the different kinds of wheat were as follows: Turkish wheat, Golden Cross, Red Fultz, Ontario, New Monarch, Fulcaster and Deitz Longberry. The seeding of the first named variety was done September 4th, and all of the other kinds were sown ten days later. The Turkish wheat stood well and covered the ground; while the later seeding of the other kinds prevented their stooling so well. The Turkish and Golden Cross wheats came through the winter in excellent condition; but in many places the other kinds showed signs of injuries on account of a lack of protection. No rust appeared on the winter wheats until about the 28th day of June, when they were so nearly ripe that it injured them but little. They were harvested on July 3d, when I estimated the yield of the Turkish wheat at twenty-four, the Golden Cross at twenty, and the other kinds at from twelve to fifteen bushels per acre."

He has come to the conclusion that all varieties of spring wheat are unreliable in Iowa, and should be discarded on account of their liability to attacks of rust. He closes his report of his wheat experiments in Bulletin No. 10 in the following words:

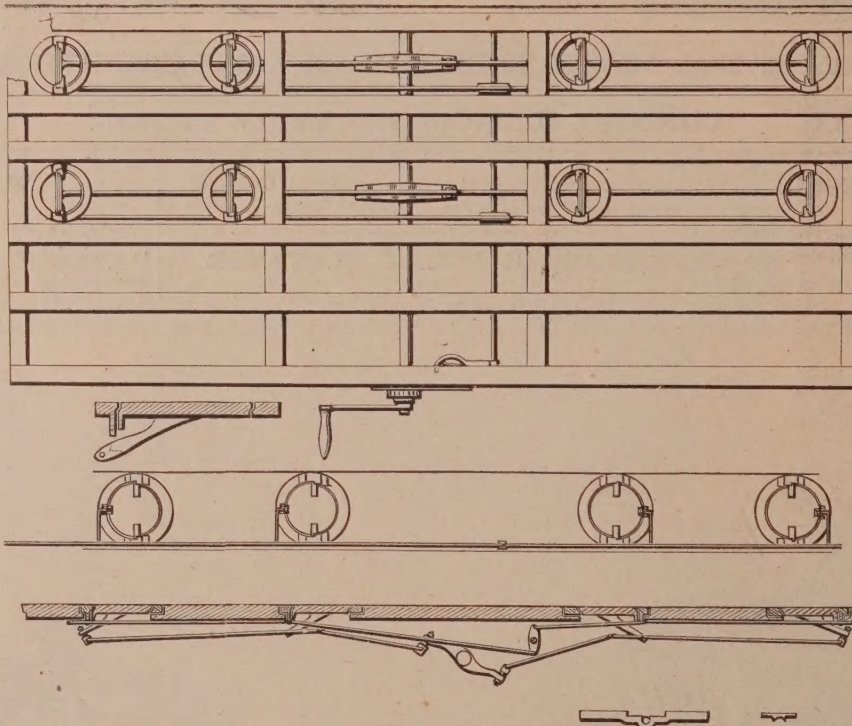
"We cannot speak positively in regard to winter wheat; but the results of our experiments indicate that the hardiest varieties may be grown successfully on well drained soils if they are mulched sufficiently to prevent the ground from thawing during the first warm spells in the spring. There is no better mulch than a dense growth of wheat blades, which can be secured generally by sowing wheat about the first of September in the northern half of the State and a little later further south. The Turkish and Golden Cross are

the most reliable varieties of winter wheat which we have tested."

GRAIN DUMPING APPARATUS.

In the shipment of grain in railroad cars, when the grain is shipped in bulk, it must often be shoveled into wagons to be hauled to the mill or place of storage. Where long trains of loaded grain cars are standing, the removal by simply shoveling is not only very tedious, but laborious. What is needed is quick and safe means for opening discharge orifices in the bottom of the car, by which the grain or other like material will be discharged into the wagon beneath, to fill it in a few seconds of time. To meet this demand D. R. Springer of Philadelphia has invented an apparatus which he claims overcomes all difficulties and does its work quickly and effectively.

In this apparatus, which we illustrate herewith the inventor has carefully considered two very important points, viz.: convenience and safety from premature, or accidental discharge during transit. The illustrations afford a plain view of the car bottom with the discharge orifices and valves arranged in series, and the transverse actuating shaft with its connecting rod mechanism, by which the whole series of valves may be simultaneously operated.



GRAIN DUMPING APPARATUS.

The orifices through the car floor are lined or bushed with metal rings. The valves are provided with trunnions that project into boxes or bearings in the rings. The lower face of the tilting valves has an integral arm extending divergently downward, this arm being perforated near its end for connection to the rods. The actuating shaft is centrally placed, and is provided with oppositely extending arms, to which the valve rods are connected. A second transverse shaft is journaled near the actuating shaft. This shaft is provided with short arms that connect with rods, the movement of which will bolt or unbolt the entire series of valves, and can then be opened in the manner already indicated. This second shaft is provided with a locking arm that engages in the inside of the outer car sill. The disposition of the discharge orifices is such, that the great bulk of grain will be discharged without the necessity of shoveling it to the openings. This also obviates the necessity of making inclined bottoms to the cars, and allows the application of the attachment to any ordinary box car now in use. This thoroughly practical invention should receive the immediate attention of railroad men and shippers who would profit greatly by its adoption.

The Jerusalem corn, which is becoming so popular in Western Kansas, was introduced by a Finney county farmer, who received two grains of it from a missionary from Palestine. The grains are pure white and nearly flat. It grows better without moisture than with it, and only fails when the hot winds neglect to put in an appearance.—*Kansas City Star*.

PHILADELPHIA'S GRAIN TRADE.

The boycott which the Pennsylvania Railroad has declared against the grain trade of Philadelphia is having a telling effect upon the export business which but a short time ago was so flourishing. It is not six months since the wharves at the grain elevators were crowded with steamships waiting to receive cargoes of corn and wheat for European ports, but to day there is not one. New York, by reason of its railroad and canal competition, is doing a splendid business, but Philadelphia is doing really nothing.

It is a humiliating fact that there have been days during the past few weeks in which not a single carload of grain arrived in Philadelphia. There have been other days in which the consignments only amounted to one or two cars. During the week ended last Saturday only fifteen carloads of grain were brought to this city. Baltimore in the same time received forty carloads, while New York's receipts by rail and canal amounted to about 3,000 carloads. In other words, where Philadelphia received one carload of grain 187 went to New York.

In the week preceding, from Nov. 1 to 8, Philadelphia's receipts of grain were only twenty-five carloads, while Baltimore got sixty-five and New York, by rail and canal, 1,800 carloads. The same wretched proportion has existed for weeks past.

The full significance of these figures can only be grasped when it is remembered that six months ago Philadelphia was doing almost as large a grain export trade as New York or Baltimore. In the first five months of the year, of the grain exported from this country, 15,000,000 bushels in round numbers went from Philadelphia; 18,000,000 bushels from Baltimore and 20,000,000 bushels from New York. This was a wonderful improvement for Philadelphia over the corresponding period of 1889, when this city's shipments were but 2,000,000 bushels, and it was hoped that the gain was to be permanent.

The old malign influences have been at work during the past six months, however, and since June there has been little chance for shippers to do any business here. For the year up to Nov. 10, Philadelphia's total shipments of grain amount to 17,000,000 bushels, while Baltimore shipped 23,000,000 bushels and New York 34,000,000 bushels, or just twice as much as Philadelphia.

While this city increased its shipments by 2,000,000 bushels, New York's increase was 14,000,000 bushels, and Baltimore's 5,000,000 bushels.

As long as Philadelphia is practically dependent upon the Pennsylvania Railroad for through Western traffic it may expect to see its business thus crushed. A competing line, such as the Lehigh Valley Railroad, would be of inestimable value to the trade of the city. During the week ended last Saturday, in which but 15 carloads of grain came to this city, the Lehigh Valley Railroad carried to New York 214 carloads, and in the previous week 99 carloads, or nearly four times as many as came to Philadelphia that week. With a terminus in this city, the Lehigh Valley Railroad could do much to give to Philadelphia that competition which it so imperatively needs if its trade is not to be entirely crushed out by the great corporation which it has fostered.—*Philadelphia Record*.

The exports of breadstuffs for the month of October were valued at \$8,343,703; for the four months ending Oct. 31, \$36,997,930, and for the ten months ending Nov. 1, \$119,037,613, against \$11,559,569, \$44,528,594 and \$101,758,303 for the same periods respectively of 1889. The exports of breadstuffs during the four months ending Oct. 31 included 208,907 bushels of barley, 15,339,640 bushels of corn, 696,087 bushels of oats, 260,289 bushels of rye, and 14,804,072 bushels of wheat, against 623,398 bushels of barley, 22,527,811 bushels of corn, 1,061,900 bushels of oats, 480,038 bushels of rye, and 18,051,154 bushels of wheat for the corresponding period of 1889.

ARMOUR ELEVATOR AT CHICAGO.

Although it is frequently claimed for newly constructed elevators that they are the largest in the world, the Armour Elevator on the Chicago, Milwaukee & St. Paul Railway at Chicago has a capacity greatly in excess of any other elevator under one roof. It can accommodate nearly 2,500,000 bushels. It is 550 feet long, 155 feet high, built of brick and surmounted by a five-story tin-clad cupola, as is shown in cut given herewith.

It was erected at an expenditure of nearly \$500,000. The outside brick wall is sixteen inches thick, and a fire wall two feet thick divides the building in the middle. All the iron doors in the fire wall can be closed by electricity. On all floors there are electric push buttons communicating with annunciators in engine room, and in the latter department there is also a fire pump with a capacity equaling that of four steam fire engines. Two hundred barrels of water, each accompanied by a couple of iron pails, are scattered about over different floors, also twenty-two chemical fire extinguishers. Forty-four fire plugs, to each of which is attached 1,000 feet of 2½-inch rubber hose, together with fourteen fire alarm boxes, complete the apparatus for fighting fire. Once every week a fire drill is ordered, the time for turning in an alarm for which is known only to the superintendent and the chief engineer. When the alarm is sounded every man takes his place, but no water is thrown. One hundred men are employed in the building.

Power is supplied by a 1,000 horse power compound Corliss Engine. The main belt is of rubber, and is 200 feet long and 5 feet wide. For starting and stopping the engine at a moment's notice a system of electric signals is in use. One hundred electric lights are placed in the building, also passenger elevators.

One shipping and two receiving tracks pass entirely through the warehouse, so that cars can be placed near to the receiving legs, of which the building contains fifteen, each having a capacity for elevating 10,500 bushels per hour. Each receiving track can accommodate twelve cars, so that twenty-four cars can be unloaded at once.

The first story is twenty feet in height. On the second which is called the bin floor, are 379 bins, or, since a portion of them are divided into three partitions, 428 receptacles in all, each 66 feet in depth, and made to hold from 1,700 to 6,500 bushels, the latter figures representing the capacity of the 379 undivided cribs. Above this floor is the spout, turntable, or revolver floor. Around each spout are grouped in a circle a dozen or more funnels. The spout revolves and readily connects with these funnels, and by having a number of these revolvers grain is distributed to any of the bins. Next is the scale floor, where twenty-eight large Fairbanks scales do the weighing, and then comes two shaft or machinery floors.

In a small office on the scale floor is a long blackboard lined off into squares and marked with the number of each bin, as shown in our sketch of a section of the same. The grain is never moved without being first weighed, and this slate enables the weigher at a glance to tell what kind and how much grain he has on hand.

To ship grain it is drawn from the bins into a hopper on the ground floor, taken up shipping elevators, twelve in number, and discharged into garners above the shipping scales, sixteen in number, and weighed by draughts of 500 bushels at a time. It is now run into a shipping bin, whence it is conveyed to the hold of a vessel, for which purpose there dangle from the side of the building sixteen dock spouts. On the land side of the elevator is a long row of windows where wagons may be loaded. Cars are loaded on the shipping track by aid of an improved bifurcated car loader, so that both ends of the car are loaded simultaneously.

The marine leg is 90 feet in length, vertical, consisting of an endless belt in a movable leg, to which belt are attached buckets capable of carrying eighteen pounds each. The elevator is carried on guides, and will lift sixty feet, taking grain from the hold of the largest propeller at the rate of 10,000 bushels an hour.

Oats received at Chicago this year do not average over 24 pounds to the bushel, and many shipments do not weigh over 15 pounds to the bushel.

BUCKWHEAT.

A correspondent of *Country Gentleman*, writing from Harford county, Md., in regard to buckwheat, says: "I wish to state that I never raised the so-called common buckwheat, but last season I sowed the Silver Hull, and one of my neighbors raised the Japanese. We took the grain to the same mill, and it required one-third more of the Japanese buckwheat to make 100 pounds of flour than it did of the Silver Hull, and the flour was much darker. It appeared to have a thicker hull and more of it than mine did. Millers whom I have heard speak of it, do not like the Japanese."

Another correspondent, writing from Sugar Run, Pa., says: "Buckwheat threshing in the field was finished last week, but some few farmers, unable to get a machine, unwilling to pound it out with flails in the old way, and fearing the good weather would not last, put their buckwheat into their barns, to be threshed when they thresh their other grain. The practice is not considered a good one in ordinary seasons, as the moisture in the straw will dampen the grain in the mow, and sometimes cause it to

becoming more general every year. The bran makes a good ration for milk production, and fed on the farm, tends to keep up its fertility."

J. A. Wilthite of Morgan county, Ind., says: "The bushel of Japanese buckwheat sent me by the Agricultural Department at Washington has proven to be much better than our common variety, both in yield and honey. My bees have done extra well from it. It is extremely prolific, and the kernels are very large."

There is a great diversity of opinion among the farmers as to the good qualities of Japanese buckwheat, and we would like very much to have the opinions of buckwheat millers who have had experience with this variety of buckwheat.

GRAIN BUYERS' ESTIMATES OF CORN.

In a letter from Nebraska the writer says: "I am afraid you make some mistakes, and so does Mr. Dodge. There is an association called the Iowa and Nebraska Grain Buyers' Association. For the last sixty days these people have had twenty-five, sometimes thirty, men in Iowa, Illinois, Indiana and parts of Ohio. These parties did not view the cornfields from a sleeping car window and guess at the yield, but went into the fields and counted the rows, and by this way of figuring they can come within twenty bushels of what is contained in each field. Their reports are nearly all in, and parties who have been paying the expenses had their faces illuminated with a broad grin when they read Mr. Dodge's report, wherein it said corn was a fraction under twenty bushels average for the country. The association figures it a fraction over sixteen bushels. Mr. Dodge also asserts that Nebraska has twenty bushels per acre. I think I know as well as any party who wants to boom land sales and furnishes those reports. We won't average ten bushels per acre, for west of the Missouri River eighty miles there is no corn at all. Last winter the C., B. & Q. R. R. in Nebraska, according

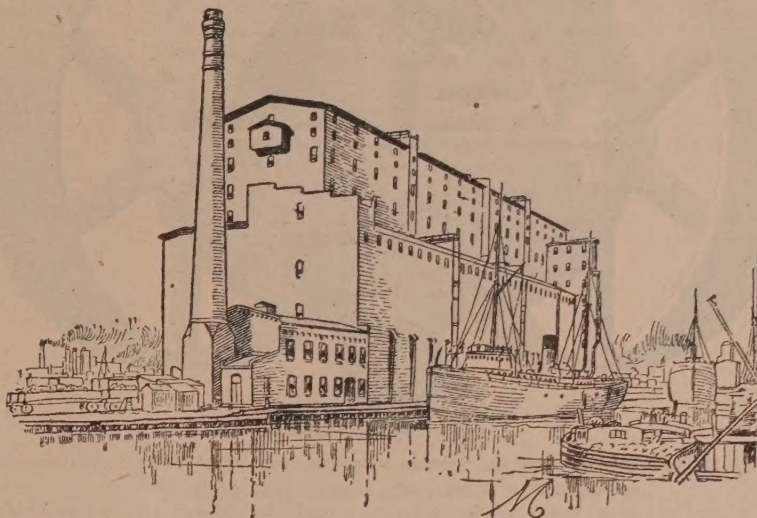
to a leading railroad official, shipped 500 cars per day. Say the other four or five trunk lines shipped 1,000 cars per day; Western Missouri, Kansas and Western Iowa approximately 1,500 cars more per day—in all, 3,000 cars. Where are the short sellers on the Chicago Board of Trade going to get this corn this season? I assert that they won't get 100 cars a day. I know what I am talking about, for I am in the midst of these corn districts, and have just got back from a thirty days' trip."

If it were in order, we might suggest to this writer that the large list of correspondents of the Department of Agriculture and the many hundreds who furnish such information to the *Price Current*, all of whom are residents of the localities and regions represented, have as good facilities for careful examination of cornfields and for making reliable estimates as to yield as these twenty-five or thirty paid representatives of an association of men having special trade interests to serve. Further, is it not as likely that errors below the mark are as liable to occur in the calculations of these special commissioners as that returns of resident correspondents in all districts should lead to overestimates?—*Cincinnati Price Current*.

PRICES VARY.

Non-resident operators especially should bear in mind that orders for the purchase and sale of grain, provisions, etc., in the Chicago market, says *Chicago Business*, cannot all be filled at outside prices. Not infrequently at the opening of a market, as well as at times when excitement runs high, prices vary materially in different parts of the various pits, and while buyers and sellers always aim to get best figures two men standing side by side frequently buy or sell at very different prices. Quick action is nearly always desired, and commission merchants aim invariably to do the best possible. But in times of excitement it is utterly impossible for every one to either buy or sell at extreme figures. We deem this statement of fact due to our merchants here as well as to the outside world.

Statistician Dodge estimates that the total corn crop will amount to about 1,360,000,000 bushels.



ARMOUR ELEVATOR.

must. I have tried the plan several times when the straw was well cured, and we had plenty of barn room. Pains were taken to pitch the gables on the mow lode without tramping, and when threshed at the beginning of winter the grain was found dry and uninjured.

"In answer to the inquiry of your Monroe county, Pa.,

109 Corn 2 Oct 17	126 Barley 3 Nov 17 Bullus	133 W R 37 Wheat 2 July 14	141 Old Shg 2 Oct 12 6 523
110 Rye 2 Oct 28	127 3 Rye Seed One Sept 24	134 White Corn 2 Sept 8	142 Corn Bulk W 15
111 White Corn 2 Oct 9 Rogers	128 RECEIVING ELEVATOR 6	135 SHIPPING ELEVATOR 4	143 R Corn
112 Barley 3 Nov 14	Oats 2 Oct 16	Corn 3 Nov 15	

STORAGE SCHEME.

correspondent, would say that nearly half the buckwheat raised in this locality was of the Japan variety, and that our millers pay the same price for it as for the common kinds, unless it is injured by sprouting. Owing to the kernels growing in such thick clusters, they retain moisture between them longer than the common kinds, and during the long spell of warm, wet weather, much of it sprouted—some before it was cut. I saw sprouts on some standing buckwheat nearly half an inch long. The common kinds that branch out more, with the kernels more scattering, did not sprout, except when a bunch fell down and the grain touched the ground. The crop was larger than usual, and a considerable proportion has been marketed. The millers are paying 40 cents per bushel for the grain, or \$1.75 per hundred weight for the flour—the farmers keeping the bran and middlings to feed their cows. The latter is the wiser practice, and is

ALMOND COUPLING FOR TRANSMITTING MOTION AT AN ANGLE.

As the result of some years' experimentation and careful elimination of imperfections as they were noticed, the inventor of the device about to be described has succeeded in producing a simple, effective and economical mechanism for transmitting motion at an angle. During the period above named, the inventor has modified the construction of his apparatus in a number of material points—notably in the method of lubrication, and in facilitating the placing of the coupling accurately in position. In respect of these important practical features, it is claimed that the invention has been satisfactorily developed.

Fig. 1 of our engravings represents the coupling suspended from the ceiling, and arranged as a right-angled countershaft, for taking motion from any point on the line shaft. Fig. 2 is the same, with the lower half of the frame removed; and Fig. 3 represents the coupling receiving and transmitting motion. The operation of the device will be best understood by reference to Figs. 1 and 2, where it will be seen that the crank arm *F* is connected with the slide *A* by the ball *D* and arm *C*; the opposite crank arm is connected with the slide *A* in precisely similar manner. Revolving, one of the crank arms carries the slide *A* up the post *B*, giving to it also a rotative movement partly around the post. This motion is communicated to the opposite crank arm, and precisely as one of the crank arms may be made to carry the slide *A* up and down and partly around the post *B*, so may the opposite crank arm, being fitted up in the same way, receive the motion and revolve in unison.

Lubrication is effected by introducing good mineral oil into the lower half of the frame *G*, until the glass oil gauge shows about half full when the machine is not in motion. When in motion, the arms *FF*, Fig. 2, in connection with the slide *A*, will rapidly distribute the oil over the interior of the frame, by which means it reaches the parts to be oiled. Enough oil passes over the shaft to lubricate the pulley bearing, the surplus being returned to the interior of the frame by a drip guard, a leather washer preventing the escape of oil beyond.

In our engravings, the coupling is shown arranged as a countershaft, provided with two pulleys at right angles with each other, one of which is to be connected by belt with the main line, and the other with the machine intended to be run by it. It will be seen at once that with such a countershaft any machine may be arranged in a position exactly suited to its location, and can be run without the annoyances incident to other means for the same purpose. The pulleys of this countershaft are fitted to run on a bearing which is solid with the frame, and through which the crank shafts pass, the outer end of the pulley hub being securely fastened to the crank shaft. By this means all the belt pressure comes on the frame and not on the crank shaft. The object of this is mainly to relieve the ends of the crank shaft of belt pressure, and to obtain as much bearing surface as possible. When it is intended to connect the coupling with the end of the line shaft, no pulleys are required, the connection being made in the ordinary way with shaft couplings.

Three sizes of this device, capable of transmitting 5, 10 and 20-horse power, are manufactured by the inventor, T. R. ALMOND, of 85 Washington street, Brooklyn, N. Y.

In Australia corn husks are utilized in the manufacture of cloth and fine writing and printing paper.

THE ALLIANCE AND ITS WAREHOUSE SCHEME.

The Washington dispatches announce that the Farmers' Alliance people, jubilant over their recent victories in the South and West, will demand of the next Congress the passage of what is known as "the Sub-Treasury bill." It is reported that they will listen to no talk of compromise measures, but that they must have all they ask for, and just as they ask for it.

What they want is this: That the General Government shall establish in the various states depositories or ware-

State rights, strict constructionists and bent on limiting the powers of the Federal Government, should propose seriously that the Government should do something so far outside of its constitutional and legitimate functions. It is impossible to find anywhere in the Constitution the authority for the erection of these warehouses, taking care of them, and the issue of "money" based on the stuff deposited in them. If it were constitutional it would be unwise. The National Government has no money resources of its own—no private source of income. What money it spends first comes from the people in the form of taxes. Were the Government to go into this visionary warehouse scheme the money, hundreds of millions, spent for buildings and for guarding property would have to be raised first by taxes. As it costs the Government on account of jobbery, "sogering," and extra men twice as much for buildings and for work and caretaking as it does private parties, it would be much cheaper for the farmer to continue keeping his crops in private elevators or in his own barn or crib.

If the Government were the guardian of these storehouses the property would be looked after less carefully and more expensively than if in private hands. There would be more wastage, more stealings, more accidents more loss. The farmers would expect all such losses to be made good to them by the Government, which pays out now a hundred and fifty millions a year for the one item of pensions. It would find this new charge of hundreds of millions a year a grievous one and would have to pile some pretty heavy new taxes on the people to meet it.

If these public warehouses are to be built at all it should be done by the states. They, if any one, should attend to that business. Let Minnesota, or Dakota, or Kansas, or Iowa, if it sees fit, build warehouses for grain and vegetables, Kentucky and Virginia for tobacco and hemp, and Alabama and Louisiana for cotton and sugar, and the Carolinas for cotton, rice, tar and turpentine. It is not the business of the Federal Government to look after these commercial and storage matters. That which will suit the farmers of one state will not suit those of another, and hence each locality should look after these local affairs for itself, on its own credit, and out of its own taxes.

But even if state constitutions permitted these sub-treasuries to be built and run it would be unwise to do it. In the first place it would be class legislation. It would be taxing the town and village people for supposed farmers' interests. If there are to be warehouses for the farmer why not for the manufacturer? Why should not cotton and woolen cloths and leather, pig iron, machinery, furniture, and ice be carried in Government warehouses as well as cotton, corn, rice, tobacco, hemp, sugar, molasses, peanuts and oranges? In the next place, the inevitable result of the issue of the billions of shinplaster "money" to the farmers would be financial convulsions and ruin of the country. It would bring down the United States to the deplorable level of the bankrupt Argentine. It is impossible to have a momentary spree which is not paid for by a terrible headache. Seeming prosperity might follow the first issues, but it would have to be paid for dearly soon after.

What the farmers need and what they should try to get is not Government warehouses where fires burn, cyclones wreck, floods sweep away, moth and rust corrupt, and thieves break through and steal, but wider markets. A score of warehouses in every county would not help them a hundredth part as much as the removal of the tariff restrictions which Latin-American custom duties

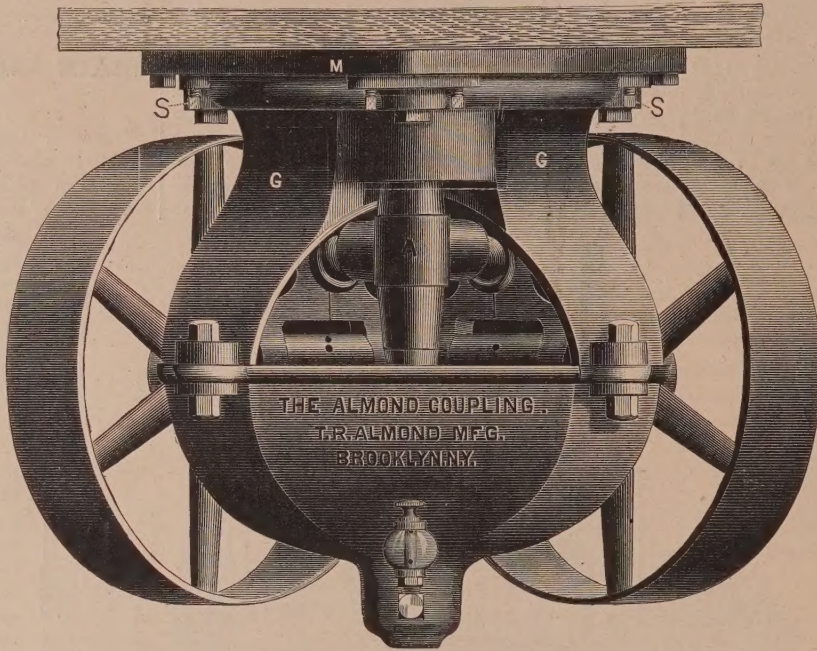


FIG. 1. ALMOND COUPLING.

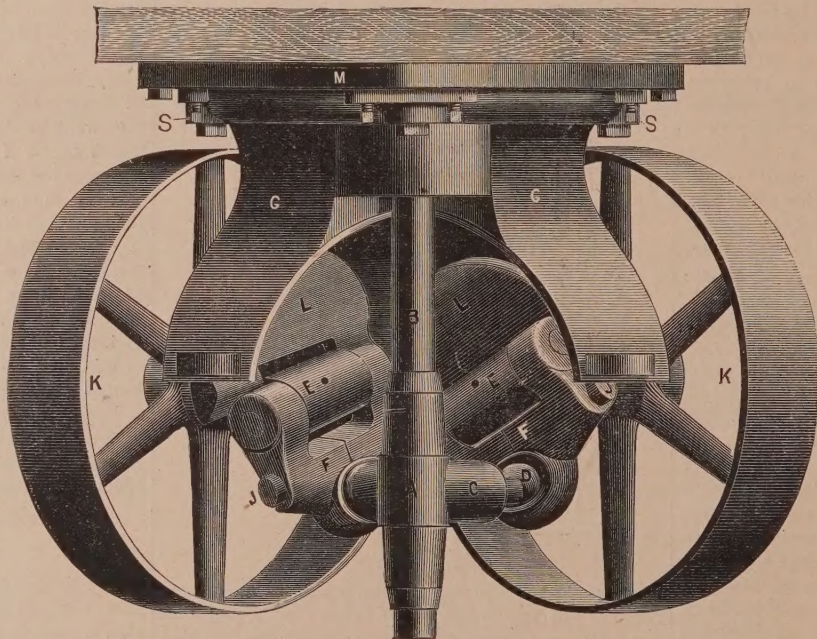


FIG. 2. ALMOND COUPLING, WITH LOWER HALF OF FRAME REMOVED.

ton, tobacco, wheat, potatoes, eggs, beans, etc. These products are to be stored in the Governmental warehouses till such time as the owners consider there is a good market for their sale. The owner is expected then to withdraw the stuff, sell it, and pay back to the Federal Government the money it advanced.

The theory is that if a farmer is not forced by his debts to throw his grain, cotton, tobacco, or vegetables on the market, but can get some one to carry them for him free of charges, and loan him money till consumers must have them, he can force them to pay him big prices.

One serious objection to this scheme is that it is unconstitutional; and it is odd that Southern men, who are

impose on American flour, pork, lard, butter, and canned food stuffs. If the Alliance members of the next House will work faithfully for Blaine's wise reciprocity scheme they can do their constituents substantial good. If they secure the adoption of the vagaries they are advocating now, they will ruin them and the community utterly.—*Chicago Tribune.*

A SPECULATOR'S WIFE.

"Lawyer Bisbee" in an interview with a Chicago reporter, dropped into a reminiscent mood and talked of things which happened during the war. He said a constant visitor at Camp Douglas, and particularly during the small-pox epidemic, was Mrs. B. P. Hutchinson, wife of the great speculator. I have known the Hutchinson family for thirty years. They lived at 114 Wabash avenue, between Washington and Madison streets. If ever a good, kind-hearted woman lived, it is none other than Mrs. Hutchinson. She made daily visits to the camp, bringing flowers and dainty morsels for the sick soldiers and administered to their wants to the very extent of her purse. She was perfectly fearless and mingled among the small-pox patients constantly, although she had never had the disease and stood in imminent danger. "Old Hutch," as you disrespectful boys call the old man, used to be in the flour business on South Water street and was constantly kicking about the money his wife spent on the sick people at the camp. He claimed that he was not worth over \$5,000 then, all told, and that his wife's extravagance in carrying out her philanthropic ideas cramped his income greatly. The Chicago Board of Trade was then on the corner of South Water and La Salle streets. Mrs. Hutchinson is a very intelligent and refined woman. She came from Lynn, Mass., and is of one of the old Plymouth Rock families. I have always had the most profound respect and esteem for Mrs. B. P. Hutchinson.

GRAIN WEIGHTS.

We had hoped our last Legislature would have enacted a law fixing the standard weight per bushel of oats at 32 pounds per bushel, as is the general custom among commercial bodies, in place of 26 pounds per bushel, and in this connection have to refer to the remarks of President Franklin Edson of the New York Produce Exchange:

The standard bushel is to day an anomaly in our own country, differing with the kind of grain. A bushel of oats in New York City means 32 pounds, while across the North River it means 30 pounds. The farmer who measures his grain by his half-bushel measure finds, when he gets to mill, that it has to be weighed. A grain merchant buys his wheat in bushels of 60 pounds, and pays freight by the hundred; he transships by ocean vessel and again pays freight by bushel. If it goes to Liverpool, it is sold by cental, if to London, by quarter of 480 pounds; to Hull or Newcastle, by quarter of 504 pounds; if to Dundee and some other places, by quarter of 496 pounds. The provision merchant buys his cut meats in Chicago by the hundred pounds avoirdupois; he pays freight to Great Britain by the ton of 2,240 pounds, and sells them by the hundredweight of 112 pounds.—*Baltimore Journal of Commerce.*

HOLDING FOR AN ADVANCE.

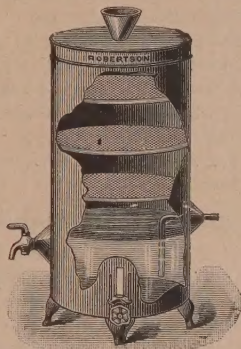
If a year since I had had a few thousand bushels of corn, oats or wheat for sale, says the Illinois correspondent of *Country Gentleman*, and had asked the advice of the grain dealer, the merchant, the average man of affairs, the politician, the lawyer and the farmer who feeds more grain than he grows: "Shall I sell at the going prices,"—the reply of each and all would have been: "Sell by all means, for the general rule is, it is better to sell at a moderate or even at a low figure than take the risk of fire, damage from rats, etc., etc." On the other hand, had I confined my inquiries for advice to the aged, wealthy and experienced grain growers, they would have said: As far as concerns corn, hold it for 50 cents, and as for the other grain, more liable to damage, hold for a moderate advance only. There are perhaps 100 farmers to-day in Champaign County who are holding—as they are able to hold almost indefinitely—from 3,000 to 10,000 bushels of corn each, for a better price than 45 cents and are almost sure to get it. These farmers say that when corn is harvested in a sound condition, and put into roof tight and well-ventilated cribs, it will keep without material loss for five or even ten years. The history of prices for the last generation shows that corn is almost certain to rise to

the price of 50 cents, and to stay there for months, as often as once in four or five years, and wealthy farmers want no better property than to hold corn over for four or five years at that figure.

Interviewing a local dealer the other day he expressed the conviction that corn would be worth 60 cents in first hands in Illinois within a year, and frankly said to some large holders standing round that he would not advise them to sell at the price ruling, viz.: 48 cents for old corn, 70 pounds in the ear.

ECONOMY IN LUBRICATING OIL.

Several processes have been devised by which the waste of oil used about various parts of machinery may be economized. Where there is much machinery in use the item of lubricants figures largely in the expenditure. Of late years the old practice of turning the contents of the drip trays and receptacles into the sewer has been abolished, and one improvement after another has resulted in the saving of from 10 to 60 per cent. of the oil formerly wasted. The latest of these contrivances, just patented by Mr. Robertson, of the firm of Hine & Robertson, 45 Cortlandt street, New York, is in the form of a filter, for which it is claimed that every drop of oil which escapes from the machinery is saved.



ROBERTSON'S OIL FILTER.

Economy in the matter of oil has now been carried so far that even the greasy dirt on the waste and rags with which machinery is cleaned and polished, is recovered. The waste is placed in a vessel, steam turned on it and the grease and dirt carried down, leaving the waste clear for further use. The oilaceous residue is placed in the filter and the lubricant recovered as pure as before use. It is pretty well admitted that lubricating and machinery oil lose but a trifle of their lubricating qualities in passing through the cylinders; consequently that portion passing out with the exhaust and what is collected from the drip pans, can be used over again. In the Robertson process the oil and water and dirt, as collected, enter at the top, pass first through a finely perforated tray, depositing all large sediment, and then through two filtering cloths. The syphon carries off the water automatically, the oil being drawn off through the cock as often as the accumulation indicated in the gauge-glass may require. The lid and filtering trays are loose and easy to clean.

DUPED SPECULATORS.

Yesterday it was found that a man who traveled under the different aliases of Moses Montefiore, Isaac Crane and Crayton, had been leading astray members of the Board of Trade. The community was shocked at this discovery, and was not surprised that the fraudulent prophet had abandoned his comfortable home on Wabash avenue. If he had confined his pranks to simple countrymen, miners, or even innocent policemen just over from Europe, people would have forgiven him, as in some sense an enlightener and educator of the bucolic or foreign character. But when a man comes to Chicago to read the minds, call up the past and tell the future of men who live on "futures," it becomes a matter on which the welfare of society depends. It is bad enough to fleece the human sheep, but when it comes to skinning the bulls and bears of commerce the guilty party must not be allowed to escape.—*Chicago Journal.*

The Illinois Board of State Agriculture reports the total corn crop of the state at 160,000,000 bushels, or about 88,000,000 bushels less than last year, when the yield was 248,000,000 bushels. The area in corn was 6,150,000 acres and the average yield about 26 bushels per acre.

WHY HE KEPT THE OATS.

It was Saturday—a pleasant Saturday afternoon in a small country town. The oat crop was just coming in and a string of teams stood in line taking their turns at unloading their oats at the only elevator in the town. It was run by a Yankee, whose personal characteristics were known to every man in the country around except a new comer. The newcomer's load stood third from the last in the line. It was late when his turn came.

"What are you paying for oats to-day?" he inquired. At this question the two men behind him heaved hopeless sighs and drove away in apparent disgust.

"Wall, now, I'll tell ye," said the Yankee, rubbing his pointed chin between his thumb and forefinger. "Ye see, a-h—ye know, a-h—ye'r a stranger here, ain't ye?"

"Yes."

"Wall, I'll tell ye—ye see, a-h, we clean oats—an' oats ain't this year what they wuz last—got struck with the blight, ye see, but—"

"But what do you pay for o—?"

"Yes, yes—just as I wuz sayin'; oats ain't No. 1 this year, an' the year before they lodged, an' the year before that they mildewed, an', jes s'I told the feller that run the place you're on, the crop's ben a failure fur off—an'on five—"

"But what will you pay for these o—?"

The stranger was not permitted to finish his question. The Yankee had shifted his quid, braced against the hay scales, and begun with fresh vigor: "Just as I wuz sayin'—we clean our oats an'—"

"For Heaven's sake, man, how did you ever manage to propose to your wife?"

"Wall, now, I'll tell ye," began the Yankee, with a smile. "Ye see, a-h—ye know—"

"Yes; I've seen a good many Yankees and I've known a good many slow-combustion liars, but I'll eat all the oats you ever told the price of if I ever saw such a one as you in all my days!"

With this he cut his team with his whip and started home with his load. The last thing he heard, as he drove away, was:

"Say, now—I'll tell ye—"

But he never did, and after that when the stranger heard a man begin a story with, "Well, I'll tell you," he moved on.

ELEVATOR CHARGES.

A correspondent of the *Miller's Review* says: The elevators claim that they must receive 1 per cent. per bushel for transferring grain from railroad cars into vessels, covering a distance of say 100 feet on the average. The vessels carry the grains from Chicago to Buffalo, a distance of 893 miles for 1¼ cents per bushel in the case of oats, and a fraction more for wheat, corn and rye. The vessels have to pay out of their freight \$7 per 1,000 bushels for shoveling, weighing and trimming, which is more than twice as much as it costs the elevators with modern machinery to handle it through their houses. The elevation of grain from cars and spouting it into vessels is an incident of the transportation to tidewater, and it seems that the elevator men are paid in undue proportion for their share of it. Grain shipped out by railroad avoids change entirely, as such grain is transferred from one road to another free of charge; so the elevator charge stands as a tax against the vessel interest alone. This is not as it should be, and if the railroads entering Chicago stand in with the elevators in their fight with the Board of Trade, the next legislature should see to it that they furnish warehouse room free to grain, the same as it is done on other commodities, or at least give the lake marine an equal advantage with the Eastern railroads with which they are in competition.

Secretary Mohler of the Kansas Agricultural Department, says that the reports received by him show that the acreage of wheat sown this fall is much larger than ever before. He says this year's crop made money for a great many farmers, and the result is they are turning their attention to wheat more generally than ever before. In Kansas last fall there was an acreage of 2,144,035 acres from which 27,940,401 bushels were harvested this year. He is satisfied that this fall the acreage will be increased at least 25 per cent. The increase is more particularly in Western Kansas, where corn and all other crops except wheat have proven a failure for the past three years.

COMMUNICATED

[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

WISH TO SUCCEED.

Editor American Elevator and Grain Trade:—We here-with hand a postoffice money order for \$1, for which please send us the AMERICAN ELEVATOR AND GRAIN TRADE for one year. We cannot do without it.

Very truly,
VANNERSON & Co.
Commission Merchants.

Augusta, Ga.

ARE KICKERS.

Editor American Elevator and Grain Trade:—The illustration in your last issue, entitled "New Wheat and Old Rye," is a dandy, and true to life. Several farmers who market their grain here and invariably kick about the price paid for grain, always take home a larger load of "old rye," or some other intoxicant, than they are able to carry and walk straight.

I inclose \$1 to renew my subscription, beginning with the December number of the grain dealer's friend—the AMERICAN ELEVATOR AND GRAIN TRADE.

Very truly,
T. T. WHITE.

NEW ELEVATOR.

Editor American Elevator and Grain Trade:—I have very recently completed an elevator of 14,000 bushels' capacity, and a warehouse with two floors 50x100 feet, on one of our best business streets, located on the C. & W. M. R. R., with connections with all railroads centering in our city. I have put in two elevators, one for grain and one for beans. At present we are only handling beans. We are pickling and barreling beans at the rate of a carload a day, of 100 barrels, five bushels to the barrel, which keeps us hustling. We expect to handle all kinds of grain, including wheat. We have a 10-horse power Otto Gas Engine, which we expect will do overwork; so far it has done nicely. When we get fully under way we will have a daily capacity of from five to eight cars a day, loading and unloading. I think the AMERICAN ELEVATOR AND GRAIN TRADE a very necessary article, especially if one is in the grain business.

Yours,
W. T. LAMOREAUX & Co.

Grand Rapids, Mich.

AMERICAN INSPECTORS IN CANADA.

Editor American Elevator and Grain Trade:—In answer to the question "what do the elevator men in Port Huron expect to gain by having the United States inspectors, now stationed in Canada, withdrawn?" will say: We expect to have American points, like Port Huron, Detroit, Buffalo and others having facilities for handling grain, get the benefit that now goes to Canadian points like Midland and other places on Georgian Bay.

As to the query: In what way and how would it affect through transportation rates on grain? we answer it would have no effect at all. The through rate by way of Canadian lines and American lines is the same. The Grand Trunk lake and rail rate by way of Georgian Bay points and Port Huron to the East is also precisely the same. The only people affected are those at Canadian points. At present they are reaping all the benefits from this traffic. The elevators—owned, no doubt, by railroad officials—are benefited, as also are Canadian tradesmen, labor, etc., to a large extent, resulting in the building up of good-sized towns to the disadvantage of American towns and interests, and without any compensating advantages whatever to any American interest. This is American traffic, destined to the Eastern states, and the government has, at the request of the Canadian roads, placed inspectors at Canadian lake points to facilitate this business.

In what way would the change affect the interests of the grain trade at large and specially Western shippers? It would have no effect whatever. The grain would go on the through rate just the same, the Canadian roads carrying what they could get of it in competition with the American lake and rail lines via Buffalo and Ogdensburg.

The Secretary of the Treasury has been petitioned and the question is now pending before him for decision.

The Canadian railroads competing for Western business all run to the St. Clair and Detroit rivers, and the same rail rates are charged from such points to the East as from Georgian Bay and other Canadian lake points to the same destination. The lake rate to such points being the same no interests other than Canadian are unfavorably affected by the change.

Very respectfully,
C. F. HARRINGTON,
For Committee of Board of Trade.
Port Huron, Mich.

SHORTAGES.

Editor American Elevator and Grain Trade:—We have viewed with considerable interest the articles in the AMERICAN ELEVATOR AND GRAIN TRADE, on shortages, and hope it will continue to agitate the matter; there is certainly a chance for improvement; copy after the Milwaukee system, for instance.

During the last two years we have made it a rule to weigh everything in the cars, and consequently have kept a pretty close "tag" on our shortages. We could show a list of shortages that would astonish the natives, but must say, however, that within the last six weeks we have noted a marked improvement in the terminal weights, and only hope it will continue and save all this vexatious correspondence, claims, etc.

Inclosed please find our check for \$1, for which please send to our address the AMERICAN ELEVATOR AND GRAIN TRADE for one year. We find it a valuable assistant to our business, and it should be in the hands of every grain dealer. Wishing you success, we are

Yours very truly,
WEBSTER BROTHERS.
Waucoma, Iowa.

INFEASIBILITY OF UNIFORM GRADES.

Editor American Elevator and Grain Trade:—The discussion of the uniform grading of grain had about ceased when Congress met again, and I presume that the many farmer representatives there will keep up a continuous clamor until a bill providing for uniform grades is passed. To satisfy the poor discontented farmers, who are just as prosperous as any other class of American citizens, I am in favor of Congress enacting a law providing that the Department of Agriculture shall establish uniform grades of grain.

The Funstan bill provided that the use of the uniform grades so established should not be compulsory. This is as it should be. Let those who wish try uniform grades. None of the present grades in use at the different grain centers should be abolished to make way for uniform grades. If the proposed uniform grades prove to be better suited to the business at one or more centers, and give satisfaction to those directly interested, they will soon displace the grades now in force. The natural laws of trade are superior to those of Congress, and if unincumbered will bring about the use of the best methods and the best grades.

It would not be such a difficult matter to establish uniform grades for corn, oats and barley, because the bulk of these grains sent to central markets from different districts do not have different characteristics. At most the varying characteristics noted in these grains from different districts are not so marked and dissimilar as in wheat from different parts of the country. Even where the locality characteristics of these grains are so marked as to permit of their being easily distinguished, they will not diminish the value of the grain to the buyer, hence will not merit a grade different from that of like grain possessing the same essential qualities, but from a different part of the country. Weather permitting, as good corn, oats or barley can be produced in one part of the country as in any other.

With wheat it is quite different, and the quality of the grain produced in different localities varies greatly. Wheats of the same general outward appearance may possess unlike qualities, and they frequently do. By destroying the form of the grain and analyzing the product the miller learns the per cent. of the wheat available for human food. Upon the value of wheat so determined the grade of wheat should depend. Millers that have had much experience with the wheat of any locality, know some of the milling qualities wheat grown in that locality invariably possess. The fact that wheat is such and such a grade Chicago, Duluth or St. Louis inspection, helps the buyer to determine some of its characteristics, so if we are to have uniform grades of wheat we must have spring and winter, hard and soft grades, and to the num-

bers usually employed in classification we must add the name of the state in which it was produced, and retain this same grade all the way from the producer to the consumer.

Such a multifarious classification might secure the uniform grading of the same grain in the different markets it passed through on its way from the producer to the consumer, but it would take a dealer at central markets a lifetime to learn the different grades. With such a system the owner of grain could, by perusing the different market reports, determine approximately the market value of his grain, if he was competent to inspect his own grain.

No man, however, is competent to inspect his own grain. In spite of any good intentions he may have, his judgment will lean toward his own interest. For this reason, among others, I claim the uniform grading scheme is not feasible.

The farmers claim that they could grade their grain and store it, and then sell it to some distant miller for future delivery, if we had uniform grades. It is not at all probable that one in a thousand of our farmers would be able to find a buyer of grain so weak-minded, so inexperienced as to buy their grain according to their grading. Even disinterested experts frequently disagree as to the grade of grain, and it would be almost impossible to get three disinterested non-experts, who were not allowed to communicate with one another, to agree as to the grade of any grain. It is foolishness to expect a buyer to accept the grading of the seller when he knows that the seller is prejudiced against him and in favor of himself. Buyers will never do this. Few of them will now buy grain by sample, from the producer unless he resides near by or is a personal friend. The consumer will never make a practice of dealing with the producer unless the producer goes to him with his wheat or sends the wheat to him for examination before purchase.

Grain inspection is not an exact science, and it does not seem probable that it ever will be. Human judgment enters to a large degree into every inspection, and human judgment is likely to err, and is almost sure to err when exercised in the interest of one's self. Even should we improve our system of inspection so much as to be able to classify it as an exact science, still I doubt if buyers would be willing to accept the inspections of the sellers. Sampling is an exact science, but, as I said before, few buyers are willing to accept the samples taken by producers as a fair representative of the grain he has for sale. Dealers frequently sell to one another and to millers by sample, but the seller is always known to be reliable and is held responsible for any difference between sample and bulk of grain.

As long as the government does not interfere with the present established grades I have not the least objection to uniform or multimform grades being established by the Agricultural Department, save that I dislike to see our statute books filled up with a lot of useless rot to satisfy the aimless cravings of farmers.

H. I. ELEVATOR.

UNIFORM GRADING OF GRAIN.

Editor American Elevator and Grain Trade:—I wish to say a few words in regard to United States Government inspection of grain.

In the very nature of business a purchaser of grain from farmers must buy on sufficient margin of profit to cover not only cost of handling and transportation, but also to include risks and losses from shortage and inspection; hence all losses from these causes naturally fall on the producer, though it is a great cause of annoyance to the shipper. State inspection is largely controlled by local Boards of Trade. The Chicago Board of Trade is composed of fully 90 per cent. of operators in *wind* only. The legislation of the Board is entirely in the interests of the option dealer and against the interests of the producer. The St. Louis inspection is dominated by the St. Louis Board of Trade and the millers' combination. The West produces the food for the East; the traffic in food products is almost entirely inter-state, and the regulation of this inter-state traffic, together with the establishment of a basis of inspection and grading, surely is a proper subject for the National Congress to consider. The producer should understand beyond a doubt the grade of the grain that he sells, and the consumer what he buys; but such is not the case. At certain points the inspection is very rigid, at others very lax—permitting manipulators to adulterate food products and thereby injure both producers and consumers. There should be a universal standard of grading grain—as near uniform all over the

United States as possible—and there is no power to do this except the Congress of the United States. A simple law vesting the power to regulate the inspection and grading of grain in the Agricultural Department of the Government under simple rules prescribed by the secretary, would work incalculable benefit to both producers and consumers.

The Illinois Grain Merchants' Protective Society, and the Kansas and Nebraska Elevator Association have recommended the passage of a law to establish a uniform standard of grading for wheat, corn, oats, barley and other grains, similar to the bill No. 11,895, introduced by Mr. Funston, and such a bill properly executed by the Secretary of Agriculture would meet the approbation of farmers, shippers of grain, and consumers, who include all classes of residents in the country, and the only objects would be the option dealers, the adulterators of grain and their friends.

We thank you heartily for the stand you have taken with us in this matter, and trust that Congress will pass such a law at a very early date.

Yours very truly,
S. K. MARSTON,
Secretary Illinois Grain Merchants' Association.
Onarga, Ill.

SHORT SELLING AND THE PRICE OF GRAIN.

An address to farmers and grain dealers, delivered by S. K. Marston of Onarga, Ill., Secretary of the Illinois Grain Merchants' Society, before the Iroquois County Farmers' Institute.]

An evil has grown up in our midst that is more injurious to the farmers than high tariffs, trusts and monopolies combined; that reduces the value of your grain at least 5 to 10 cents per bushel; that has cost the farmers of the Northwest in the past ten years more than enough to pay the national debt. I refer to the Chicago Board of Trade. More than nine-tenths of the Chicago Board of Trade deal in wind only (options). Less than one-tenth handle the actual stuff and do the business of the country grain shipper.

Originally, option business was simply purchases made by the Eastern or interior miller or feed store man to secure regular supplies at regular prices. It was very convenient for the country shipper to contract with the farmer and sell for future delivery to supply this want, and the system resulted in regulating and equalizing prices to a great degree.

Parties could do this with some degree of safety, because it was found that if a person was unable to get the contracted grain in to fill the sale he could buy current receipts, and the purchaser, if he so desired, could dispose of any surplus to other parties.

So long as the value of these purchases and sales equaled only the value of actual productions, no great abuses resulted, and it was found that people could speculate all they desired on these actual amounts. Cases have been recalled where a single 5,000-bushel lot has been passed around and filled forty to fifty sales and the same repeated.

As this business increased, the proportion of members who followed the option business exclusively increased very rapidly. Large receiving houses gave up the handling of country grain and devoted their talents exclusively to the option business. As the speculative element of the board increased it soon formed a large majority of the membership. It became apparent, also, that the country element seldom speculated for a decline but always for an advance. It was found that \$100 would go farther toward depressing values than \$1,000 would toward appreciating them. The membership naturally took the bear side, and the first lesson in the Board of Trade primer is: "Sell on the bulges and fill in on the breaks." It does not require a Solomon nor a Daniel to see that the effect of this must be to depreciate values.

The farmer must sell the bulk of his crop soon after harvesting the same. The consumer will not take his year's supplies at any price. The country dealer cannot carry the entire burden, but capitalists are able and willing to hold it, for a reasonable compensation, until the consumer needs it. Capital is very timid. It requires assurance of security and profit, and many times when it has attempted this it has found short sellers opposed to it and has been obliged to succumb. Occasionally, when the conditions have appeared to warrant, capital has taken hold to sustain values; then comes the "tug of war," and then the cry is raised, "A corner."

It became evident that certain rules were necessary to

protect "short sellers," and the Board promptly adopted all rules necessary for that purpose, even adopting rules to protect "shorts" in the middle of a deal. The rules on margins enable the city to shake out the country more easily, the clearing house and buying of deals and the settling of differences, instead of actual deliveries, making it possible for a man with a sufficient amount of money to ruin the entire country.

Members of the Board claim that all these contracts are for actual stuff and the purchaser can secure the actual delivery of all that he buys. One instance will illustrate the fallacy of this. A prominent member of the Board of Trade sold McGeogh option wheat at \$1.20 per bushel. When his wheat came in the market had been forced up to \$1.39. Instead of delivering his wheat on the sale made at \$1.20, he sold it for \$1.39 and refused to fill his sale at \$1.20, crying "A corner." The Board attempted to suspend him (they ought to have suspended him by the neck), and he appealed to the courts. In the trial of the injunction suit he swore that at the time he refused to fill the sale at \$1.20, but took \$1.39 for it, the stuff was only worth \$1.18 per bushel. Yet they claim that all transactions are bona fide, and a man will get all he buys if he wants it.

This speculating in futures has increased more than a hundred fold during the past ten years. This short selling has cost the farmers of the Northwest more than enough to pay the national debt and rendered our business very uncertain, forcing us to hedge in the city against stored grain in the country. It is claimed that this simply steadies the market; that we are benefited by being able to sell against our stuff in the country; that when they sell it down they put it up in buying, but those who take this position are not close observers. The experience of the past two months gives this the lie. Look at the corn market. Prices advanced legitimately and without any manipulation from 40 cents to 56¼ for May delivery. The country bought all they wanted and stopped. Then commenced the raiding and pounding, until the markets broke below stop-order points that threw vast quantities on the market, and broke it to another stop-order point, and the result was the market was hammered down 8 cents per bushel without any reason or cause whatever. There has been no time in the year when the demand has been stronger than when the market was highest. The Eastern consumer accepted the situation, and believed that prices were legitimate and even higher prices were expected. To-day corn is 10 cents lower than the circumstances actually warrant, or would have been had it not been for the raiding of the markets. The country grain merchants put up the prices but could not sustain them. They never enjoy life more than when they are paying their customers good prices.

Within the last five years the systematic selling on the bulges and manipulating the breaks has enriched a few men until they now command untold millions, and their heels are upon the necks of the entire farming and business interests of the Northwest and in fact of the world. The *Mark Lane Express*, an English commercial paper, published an article a year or two ago showing that this short selling in this market was the great cause of the depreciation of farm products of the entire world.

At times these men dominate and control the markets of this country, and you who hold the grain supplies see ruin staring you in the face. You are asking yourselves where is the remedy, and echo answers "Where?"

If you attempt to sustain markets by buying options, these fellows will sell you wind by the millions of bushels. If necessary, they can change the rules to clean you out. They can put up margins "until the cows come home," and still they have more of the same to sell.

Now, gentlemen, what business have these men, or any men, to sell the stuff in your cribs until you dispose of it? The farmers raise the grain, the grain merchant buys it and furnishes the money and facilities for handling it, and these men fix the prices. They tell the consumer: "Hold on; these reports of short crops are false. There are untold millions of bushels to come forward. Just wait awhile and we will give it to you much cheaper." The government guesses are utilized in the face of the most authentic information to produce the same convictions. I make the statement boldly that the actual conditions warrant and justify at least \$1 per bushel for wheat and 60 cents for corn, and these would be the ruling prices to-day were it not for this wrecking of the markets. The Board of Trade is one of our great institutions; but, gentlemen, there is no need that these fellows, who never handle a bushel, should sell every day more than Chicago

handles in a year, in order to have what they call an active business. Business! There is no business about it. It is pure, unadulterated gambling, and not a square game, either. They load their dice and mark the cards. This is harsh language, but it is my honest belief, after studying the growth of option dealing from its birth until now.

The country grain men are interested in this matter, and about all the actual, bona fide handlers of grain on the Board. A more honorable set of business men never associated together than the receivers of the Board—the one-tenth I have referred to. Our weights, sales and returns are the fairest, most prompt and correct of any market in the world, but the scalping element, led by the great millionaire wreckers, contains the worst thieves and swindlers in the world.

At a recent meeting of these receivers the rule protecting short sellers was denounced in as strong language as I have used. They were compared to the "bloodsuckers," called "thieves and burglars." They claimed that it was "criminal" to fleece the farmers by selling to depress the market with no expectation of ever delivering a bushel. They voted to repeal the rule June 1. This was a mistake; every day it is allowed to stand is a crime against the country. The country dealers are taking notes. This meeting was an acknowledgment that the Board of Trade actually controlled the value of the produce of the world.

What is a corner? It is simply an attempt to sustain the value of products against those who would depreciate it. We compete in the markets of the world with the products of other countries, and the law of "supply and demand" must regulate values if allowed to have legitimate force and effect.

No one ever attempts to run a corner until he is forced to in self-defense, and he never expects to make a profit on the cash stuff. A man bought 1,000,000 bushels of grain to carry as an investment. He was forced to buy 18,000,000 of wind to sustain the value of the 1,000,000 of actual grain.

No man who has grain to deliver on his sales, or who has grain to sell, is ever hurt by a corner. It is only the man who sells what he has not, and can't get, who is hurt. He first forces the other to buy what he don't want, and then complains because the other fellow won't let him have it back at less money.

There is, however, another kind of a corner now being run in Chicago to depress values. Just as surely a corner as any ever run. Unfortunately there is no limit to this wind. Who are being hurt by it? Every man who has a bushel of grain to sell.

Farmers talk of overproduction. Limit production and you will increase values, etc. I want you to put this one thing in your pipe and smoke it. The world has been producing grain for thousands of years, and has never yet accumulated a surplus that would give three months' supply. There is no need yet of limiting production.

There is a principle in the unwritten or common law, acknowledged by all courts—whatever is contrary to public good is unconstitutional and unlawful. This short selling comes emphatically under this head, but there is no statute or penalty. Now, where is the remedy?

A bill was introduced during the last session of our legislature making it an offense punishable by fine or imprisonment, or both, for any person to sell farmers' products unless the actual stuff was behind it. A farmer could contract his crop, the dealer could sell for future delivery what he had contracted of farmers, and these contracts would be prima facie evidence of the stuff behind and could be dealt in just as certificates of stocks are; speculation must be limited to the actual production.

It looks now as if the farmers in Missouri would get \$2 a barrel for their corn. In this state corn is always measured by the barrel. If a man should ask a Missouri farmer for a bushel of corn, he wouldn't know what to make of it.—*Kansas City Star*.

We have not expected to see wheat go below \$1 at Chicago, but the money pinch discourages buyers and encourages selling. Receipts of winter wheat are decreasing daily. We have expected the decline would start farmers to selling, as formerly, but it is more and more obvious that there is a concert of action on their part, and that their societies are exercising great influence over them in respect to selling their surplus. We are glad of it. We hope the farmers will begin to derive more benefit from their toil than they have done heretofore.—*Toledo Market Report*.

MUST DEPEND UPON AMERICA.

The Corn Trade News of Liverpool, in its issue of Nov. 25, said: We have had a good deal of wheat during the last few weeks, but now winter is setting her seal upon the outlets of the great granary of the world. After this week instead of there being twenty ports shipping, there will be only four—Odessa, Sebastopol, Novorossisk and Sulina. Then, unless the continental demand diminishes, America and India will be called upon to cope almost alone with the weekly demands of Western Europe.

INSPECTION OF GRAIN AT CHICAGO.

Through the kindness of P. Bird Price, Chief Inspector of the Illinois State Grain Inspection Department, we are able to give our readers an epitome of the twentieth annual report of Chief Inspector of Grain to the Illinois Railroad & Warehouse Commission earlier than usual.

The twentieth annual report of the State Grain Inspection Department includes its transactions from Nov. 1, 1889, to Oct. 31, 1890.

It has been the most prosperous year in the history of the department.

The receipts show an increase of 2,432 cars and 65,610,333 bushels over the year 1889, and of 23,073 cars and 30,836,254 bushels over 1889.

The relations of the department to the trade have been unusually pleasant during the year.

The number of appeals from the decisions of the inspectors to the Committee of Appeals has fallen off about one-half, and there has been a noticeable absence of criticism and complaint.

The constant attention of the Supervising Inspectors who go daily from track to track watching the work and preserving evenness of standards in the entire field, have tended to a higher standard of efficiency, and a greater devotion of the men to the work in hand.

Their detection of any irregularity and their prompt correction of errors has resulted in more exact justice to shippers and done away with the complaints of unevenness of grading.

The inculcation of a spirit of self-reliance in the inspectors and a stimulation of their professional pride by a judicious system of promotions and a rigid discipline in all matters involving neglect of duty and disobedience of orders, have tended largely to the improvement of the service.

Each man has been made to realize that his retention in his position, or his promotion to a higher one, depends entirely upon his own qualifications and his fidelity to duty, and not in any degree upon the personal or political influence he may be able to command.

The character of the service required of an inspector, and the very delicate and responsible nature of his duties require that he should be not only absolutely free from apprehension as to the tenure of his office, but that he should, as far as possible, be divested of every interest or association that would divert his mind from the constant study and application necessary to substantial success in his profession.

The requirements of the trade are such that the bulk of the work on the tracks must be done in time for the same day's session of 'Change, and the office work be practically over before the time for closing the afternoon mail.

This, with the very large percentage of grain shipped on "through bills of lading" and stopped in Chicago for inspection at points many miles distant from our regular stations, has a natural tendency to increase the expenses which has been strengthened this year by the large increase of receipts. Notwithstanding all this the cost of inspection, including every expenditure for inspection, registration and appeals, has been but 41-100 of a mill per bushel of grain handled.

The fees for inspection, which were reduced from 35 to 30 cents per car Dec. 1, 1889, it is recommended to reduce to 25 cents per car Dec. 1, 1890.

In all comparisons of the earlier with the later reports of the department it is necessary to take into careful account the average loading of the cars, which has increased since 1877 within a fraction of 75 per cent.

In 1877 the average contents of each car was 416 bushels; in 1878, 451; in 1879, 460; in 1880, 491; in 1881, 520; in 1882, 559; in 1883, 572; in 1884, 601; in 1885, 608; in 1886, 641; in 1887, 673; in 1888, 685; in 1889, 684; in 1890, 727.

From the above figures it will be seen that, at our present loading, the rate of 25 cents per car herein recom-

mended would be equivalent of a rate of but 14½ cents per car if the average loading of 1877 prevailed.

A comparison of the figures of the Chief Inspector's report of cars inspected shows that out of the 272,956 cars of grain inspected but 125,502 of them, or about 46 per cent., went to store, the rest being either through billed, sold on 'Change and reconsigned East, taken to private warehouses, or sent into consumption in the city.

The following table shows the work of the department for the year ending Oct. 31, as compared with preceding years:

INSPECTION ON ARRIVAL—COMPARATIVE STATEMENT OF INSPECTION FROM 1880 TO 1890, INCLUSIVE.									
Year.	Cars.	Boats.	Winter Wheat.	Spring Wheat.	Corn.	Oats.	Rye.	Barley.	Total.
1880.....	270,524	1,022	5,887,500	17,312,068	91,185,379	18,873,408	1,645,545	3,991,576	138,896,368
1881.....	227,119	950	1,682,311	18,398,187	76,017,132	22,612,368	1,221,843	4,177,762	124,109,603
1882.....	171,218	607	1,157,298	13,018,301	48,775,863	25,000,350	1,088,397	5,863,804	99,083,953
1883.....	235,213	477	6,953,091	13,010,095	72,258,590	33,392,184	4,980,600	8,824,316	137,418,846
1884.....	210,822	351	7,163,624	16,782,273	54,900,598	39,593,860	3,752,180	6,755,827	138,648,362
1885.....	212,270	460	2,354,848	24,024,672	56,700,951	38,859,040	1,798,951	8,032,764	131,779,960
1886.....	201,103	400	5,505,054	10,644,844	68,477,686	42,534,082	1,104,396	10,262,960	131,529,052
1887.....	189,130	503	6,639,573	17,067,973	50,700,475	45,974,724	852,324	9,402,000	130,297,069
1888.....	211,818	341	7,265,135	10,191,034	66,391,548	52,617,987	2,357,792	8,821,344	147,344,840
1889.....	249,883	362	13,695,185	14,651,590	84,775,590	58,768,512	2,570,410	9,206,163	173,670,447
1890.....	272,956	610	9,126,046	9,320,484	94,991,620	74,645,342	3,085,129	13,378,080	204,506,701

INSPECTION FROM STORE—COMPARATIVE STATEMENT OF OUT-INSPECTION FROM 1880 TO 1890, INCLUSIVE.									
Year.	Winter Wheat.	Spring Wheat.	Corn.	Oats.	Rye.	Barley.	Total.	In and Out Inspection.	
1880.....	5,120,240	16,655,318	75,002,011	3,562,034	939,740	1,275,223	103,154,466	242,050,834	
1881.....	1,173,720	13,673,941	60,285,410	3,421,724	705,241	1,776,898	80,584,894	210,694,497	
1882.....	9,429,565	7,434,783	38,157,208	5,626,482	1,091,137	1,236,301	62,975,366	138,668,139	
1883.....	5,201,303	5,854,521	52,391,148	6,415,597	3,190,923	744,086	73,797,578	211,276,444	
1884.....	4,441,460	12,996,124	30,667,783	6,621,698	2,837,022	1,266,691	58,890,778	187,479,140	
1885.....	1,011,665	7,715,039	31,661,591	3,665,637	2,887,790	296,790	45,578,922	177,358,882	
1886.....	2,648,956	10,500,918	41,645,020	4,765,724	635,174	1,052,013	61,249,305	192,778,757	
1887.....	3,090,541	17,042,628	39,848,323	10,153,370	394,948	1,044,871	75,008,411	205,395,480	
1888.....	3,000,541	6,365,790	46,754,284	14,818,254	516,942	1,157,523	72,673,334	217,890,263	
1889.....	9,156,010	3,637,232	66,517,282	20,608,531	1,778,321	1,399,573	103,156,949	276,827,396	
1890.....	4,108,468	4,030,471	57,285,534	16,839,843	1,666,253	1,753,839	85,744,408	290,251,109	

LONDON BUCKET SHOP.

A new phase of the bucket-shop business has sprung up in London, and has gained such extensive headway as to call forth a protest against it there as strong as that made by the Chicago Board of Trade. The London bucket plan has the advantage over the one followed in this country, in that it is not dependent for success upon a continuous string of quotations kept up during business hours. The bets are made each day on the opening price in the regular market of the succeeding morning. If the London manipulators of these institutions be as sharp as their Chicago brethren have shown themselves to be the "starting price" must be the subject of a great deal of effort, and far more dependent on the character of the evening betting than on the news of the morning, which otherwise would determine the initial selling value. It is said, too, that the betting in those places is largely done by clerks and office boys, and that the result is great demoralization. The police are loudly called on to suppress the nuisance, but probably will not interfere, as the privilege of betting on any and everything that takes his fancy is one dear to the heart of the average Englishman.

A prominent grain dealer who has traveled some, says Kansas will not turn out this year five bushels of corn to the acre; Nebraska not over thirteen bushels; that corn will reach 65 cents in Chicago before next May; wheat \$1.25, and pork \$15.

RECEIPTS OF WHEAT AT PRIMARY MARKETS.

The receipts of wheat from June 28, 1890 to Dec. 6, were, at Chicago 8,736,000 bushels, Milwaukee 3,948,000, Minneapolis 25,186,000 and Duluth 10,298,000; total, 48,138,000 bushels; against, Chicago 14,574,000 bushels, Milwaukee 4,128,000 bushels, Minneapolis 26,576,000, and Duluth 12,140,000, in same period of 1889; a total of 58,140,000 bushels. The total for 1888 was 39,678,000 bushels.

From June 28, 1890, to Dec. 6, the receipts of wheat at St. Louis amounted to 7,870,000 bushels, Toledo 4,321,000, Detroit 2,711,000, Kansas City 5,624,000 and Cincinnati 594,000, making a total of 21,120,000 bushels. For the same period of last year the receipts were: St. Louis 10,488,000 bushels, Toledo 5,201,000, Detroit 3,554,000, Kansas City 1,796,000, and Cincinnati 1,023,000 bushels, a total of 22,050,000 bushels, against 25,638,000 bushels during the corresponding period of 1888.

The receipts of both winter and spring wheat at Chicago, Milwaukee, Minneapolis, Duluth, St. Louis, Toledo, Detroit, Kansas City and Cincinnati, from June 28 to Dec. 6 were 69,258,000 bushels in 1890, against 80,197,000 in 1889, and 65,316,000 in 1888.

EARLY RIPENING WHEAT.

It is a great thing for the Northwest to have a variety of wheat which will ripen early and still be of a fair quality. Hitherto it has been found that the early ripening wheats do not make flour of as good a color as the later varieties, while the quality is perhaps equally good. The eyes of flour buyers and consumers are attracted by white flour. That, however, is more of a sentiment than anything else. Flours a shade off in color are frequently just as good for bread as the whiter varieties.

Over in Manitoba the Government has been experimenting at the experimental farm of the province with more than 100 varieties of wheat from all parts of the world. It has been found that the Ladoga wheat is quite as prolific as Red Fife and ripens earlier. Flour from Ladoga is somewhat darker than that of Red Fife. The fact that it ripens about ten days earlier than the latter is very much in its favor. At the Minnesota experimental station Ladoga has been under test with favorable results also. In Canada experiments have been made crossing Ladoga with red and white Fifes. These experiments will be continued. Such tests have to be made through several seasons, that results may be announced on a basis of absolute certainty.

RUSSIANS CARTING GRAIN.

The *Vicstnik* of Odessa reports that the old-time custom is being revived in South Russia, that peasants bring their grain and produce to the market on their own wagons rather than transport them by the railroads. Tchoomacks, peasants driving their own wagons from neighboring governments, are frequently seen on the grain and produce markets of Odessa, after having spent eight or ten days on the road. They say that by carting it themselves they realize 20 copecks more on each pood (40 pounds) of grain than they would if they had sent it by rail. The high rate charged for freight, and the trouble which the officious railroad clerks cause to the common people, are assigned as reasons for the revival of the laborious custom.

OLD HUTCH SUED.

B. P. Hutchinson, the well-known and wealthy Board of Trade man, has been made defendant in a suit for \$10,000, brought by Samuel H. Bonns, a broker, as plaintiff. The suit is the outgrowth of a friendly game of "seven up," in which Hutchinson, Bonns and one Lowenstein engaged. Hutchinson selected the game and named the stakes, but fortune did not smile upon him, though the millionaire Board of Trade man gradually increased the stakes and attempted to force his luck. When the game broke up Hutchinson found himself several thousand dollars behind, represented by I O Us given to his fortunate opponents. He was asked to replace these slips of paper by a check on bank, but he most emphatically refused to do so on that occasion as well as later on. Hence the suit.

The Great Northern has refused the transfer of cars for grain commission men.

RUSSIAN GRAIN TRADE.

A St. Petersburg correspondent of the Philadelphia Press says: Probably but few Americans are aware that Russia has begun to make vigorous efforts to improve her grain trade by the introduction of the American system at her principal ports and at centers in her interior. In the near future, if we are to judge by the recent rapid development of the trade of the Caucasus, where the efforts of the new system are being felt, the United States will find it no easy task to maintain her present hold on the European markets.

Already, to speak only of what has actually been done in this direction, elevators have been erected at St. Petersburg, Odessa, Libau and Eisess, and also at many of the principal railway stations of the interior; new railways have been constructed in many of the richest agricultural districts, tariffs have been reduced, and many other reforms of a like nature have been carried out.

But whatever the lethargy of the government in the past, it is but just to them to say that, now that they have got over their lengthy process of awakening to the necessities of the situation, they are showing a commendable sense of their responsibilities and doing their best to make up for lost time.

Among ports which have benefited by this new order of things is Novo Rossiesk, on the Black Sea, which furnishes a remarkable example of what can be effected in Russia under the new system. Ten years ago Novo Rossiesk was a small fishing village, whose fishing population was augmented only by a few Russian soldiers and officials. Russian authority did not extend, or rather was not expected, beyond the village itself. The adjacent heights were still in the hands of Circassian mountaineers, who passed most of their time, when not in feud with each other, in "potting" such of the Russian garrison as came within the range of their rifles.

As if by magic this barbarous condition of affairs has undergone a thorough change, and the good fairy has not been the armed might of the empire, but that greatest of all civilizers, the railway. Three or four years ago M. Stanislaus Kerbedz, a Polish engineer of some fame, conceived the idea of joining Novo Rossiesk by a branch line with the Vladikavkaz railway, and in 1888 the railway was ready for traffic.

No sooner was the new line opened than grain commenced to pour into Novo Rossiesk in enormous quantities. In the year of the opening nine steamers loaded at the new port and carried away with them 34,000 tons of grain. In the following year ten times as many steamers visited the port and nearly ten times as much grain was carried away. In the short period of eighteen months the exports of the quondam fishing village equaled, nay, even surpassed, some of the oldest grain ports in Russia, such, for instance, as Reval, Libau, Riga and Nicholaieff.

The total export for the present year, judging from the statistics of the first six months, will amount to more than 36,000,000 poods, that is to say, in English measure, over 535,000 tons. According to the Minister of Finance, the exports from the principal grain ports on the Baltic and Black Seas are as follows, viz.:

Name of Port.	Amount Exported to Aug. 1.
Odessa.....	44,590,417 poods
Rostoff.....	29,921,680 "
Novo Rossiesk	20,674,987 "
Libau.....	15,750,736 "
Sevastopol.....	8,925,640 "
Riga.....	6,752,452 "
Reval.....	6,818,112 "
Total.....	132,434,024 poods

This exportation is, in round numbers, over 2,000,000 tons. Considering that the port of Novo Rossiesk has been opened so recently, its place on this list speaks volumes for its future. It seems destined to become, as I have elsewhere called it, the Chicago of Russia. The railway company are sparing no money to make the port of Novo Rossiesk one of the most convenient and least expensive of the Russian ports. Lately they have obtained the permission of the government to their erecting a large elevator for cleaning, weighing and conditioning the grain previous to shipment. This elevator will cost about 1,000,000 roubles, and the special mechanical apparatus necessary to connect it with the various magazines of the port will entail an expenditure of another million roubles. The storage capacity of the warehouses and magazines is at present 7,000,000.

The quality of the wheat shipped from this port is very high, and as soon as the American elevator has com-

menced to clean the grain it is believed that in London markets, Novo Rossiesk wheat will fetch a price still higher than at present. The success of the port has attracted the attention of M. Vishnigradsky, Russia's able Minister of Finance, and has induced him to make a personal inspection of the place.

Not only has the government, on this Minister's advice, given permission for the construction of the elevator referred to, but they have consented to the erection of smaller elevators at the different stations of the railway, where the land owners and peasants will be able to store their grain and to receive advances thereon, as is already the case with those using the Southwestern line. Already a number of warehouses have been built at the port and three large grain shutes, lighted by electricity.

Last year the influx of cereals was so great that the storage capacity of the port fell far short of the requirements, and over 8,000 wagons were under grain at one time, 3,000 of which had to remain at the station three months undischarged. The railway company are now straining every nerve to make the port another Odessa, despite the opposition of the large Jewish and Greek shippers, who are, of course, anxious to preserve the old regime as long as possible, and of that large class of officials who dislike any and every change because it is a change.

Fortunately for the Vladikavkaz Railway Company, they have obtained almost a monopoly at Novo Rossiesk, and will not experience much difficulty in applying the American system. Even the partial application of the system has already borne fruit. The shipping expenses are now about half the figure they used to be. The list of charges at the present moment are as follows, viz:

	Copecks, per 361 lbs.
1. Carting from wagons to storehouses.....	4
2. Shoveling.....	2
3. Sifting and cleaning.....	3
4. Carrying from store to company's wagons.....	15
5. For work in the hold—	
Single-deck boats.....	1
Double-deck boats.....	1 1/4
Bagging in holds, per bag.....	2

A copeck is equal to a little more than half a cent at the present rate of exchange.

In estimating the growth of the trade of this region in the future it must be borne in mind that its present stage is that of infancy. Only 10 or 15 per cent. of the virgin soil of the Caucasus, fit for growing wheat, is at present under cultivation. When the country becomes more settled, and its vast resources drawn upon, it is not improbable that the port of Novo Rossiesk alone will ship ten times more grain than it does at present.

But, excluding the Caucasus from consideration, Russia possesses immense regions of Choruce Zorn (virgin soil) in the oasis of Mery, South Russia, and Southern Siberia, which no plow has yet touched. The Vladikavkaz line alone runs through 4,800 square miles of this soil. In this district of Stavropol there are 1,400,000 acres of land capable of producing wheat of the finest quality, of which only 10 per cent. is under cultivation (producing annually 20,000,000 poods of grain), and even this small proportion in a manner most American farmers would be ashamed of. Indeed, the methods of cultivation in vogue in the Caucasus and South Russia are exceedingly primitive. Machinery is hardly ever employed, and was totally unknown to the farmers of this country until two or three years ago. American manufacturers of agricultural machines would, therefore, do well to turn their attention to this new field now open to them. Some manufacturers have already done so, for I hear that of 4,000 tons of agricultural machinery carried by the Vladikavkaz railway last year, a large proportion was of American manufacture.

Advices from Spokane Falls concerning the fair say: "Many things shown at the exposition here would be regarded as freaks of nature if produced anywhere but in the state of Washington. Among the exhibits were 101 bushels of wheat from one acre, 27 pounds of potatoes from a single hill, 7 pounds of splendid grapes in a single bunch."

In some Eastern cities the primitive fashion of weighing grain in 100-pound draughts yet prevails, and the weigher, as each draught passes through the scales, makes a record of the fact by placing a grain of corn upon a beam or any handy projection. Now and then several of these grains roll off and are lost, but this is immaterial, as he readily adjusts the matter by charging the shortage to Chicago shippers.—Chicago Inter Ocean.

Trade Notes.

The Borden & Selleck Company has been incorporated at Chicago, Ill. The capital stock is \$50,000.

The Nordyke & Marmon Company of Indianapolis, Ind., have been greatly rushed of late, and recently were compelled to lengthen the daily running time of their shops.

The Ingersoll Milling Machine Company has been incorporated at Rockford, Ill., to manufacture machinery. The capital stock is \$60,000, and the incorporators are Winthrop Ingersoll, H. W. Price, I. Z. Hasted, G. T. Penfield and C. M. Haven.

Borden, Selleck & Co. of Chicago report trade in Harrison Conveyors excellent. The demand for the conveyor for handling coal, tanbark, etc., is more than usual, and among the purchasers in the grain line are D. P. Foster & Co., Palmyra, N. Y.; Schlooser & Co., Hamilton, O.; St. Paul & Kansas City Grain Company, Yorkshire, Ia., and T. Arterburn, Lena, Ill.

The Charter Gas Engine Company of Sterling, Ill., writes us that during the three months ending with November, orders for nine 20-horse power "Charters" were received, besides orders for other sizes, and they are not all filled yet. The orders were received from points from Pennsylvania to Washington, and each one shipped has been set up and operated according to the printed directions. All are giving splendid satisfaction; which is the case with all the "Charters."

CANADIAN BARLEY.

About 1,800,000 bushels of barley were sent over from Canada this year to supply American maltsters and brewers before the new tariff on barley went into effect. It is said that 300,000 bushels were due at Oswego and Rochester ports only a day or two before the first of October. By getting the barley in bond the maltsters were entitled to the lower rate of duty, the government being meanwhile required to store the barley until it is required for use. It would seem from this that the barley duty ought to help farmers who grow that grain. Some of them, however, deny this. They say the Canadian barley, chiefly from the Bay Quinte region, is heavier than any that can be grown this side the line, and the maltsters will have it even if they pay the extra duty.

As the duty on rice is taken off by the new tariff, maltsters will be tempted to use broken rice for malting. This has been done heretofore when barley was very dear. Corn has also been used in certain proportions with barley in making malt. It makes a stronger, or, in other words, more intoxicating, beer, and its use ought to be discouraged by public sentiment at least, if not by law. The maltsters this year have secured their supplies of Bay Quinte barley. Probably as good a barley as that grown in Canada could be produced in Northern Michigan and Minnesota, where the climate is similar to that of the Bay Quinte region. Taken to other localities the Bay Quinte barley soon degenerates, as do oats also in the States, and both require to be renewed by Canadian-grown seed.

Since the American tariff on barley was advanced the Canadian Government has been experimenting with two-rowed barley in hope of producing barley to suit the British brewers.

In reply to a Toronto reporter, Prof. Saunders recently gave some information in reference to the two-rowed barley tests this year. Mr. Saunders said that samples that had been received at the experimental farm from Ontario points were very good, considering the season. They ranged from 53 pounds to 55 pounds to the bushel. Some of the samples were of very good color, others were more or less so, dependent on the character of the season where they had been grown. Messrs. Tuckett of Hamilton, who cropped ten acres of two-rowed this year, are very well pleased with the results they have attained, the crop averaging 34 2-5 bushels of barley of first-class quality to the acre. Prof. Saunders thinks that for the first year the experiment is of a most encouraging nature. Parties who have grown six-rowed alongside of two-rowed have in every instance reported that relatively the two-rowed made the better showing, both in quality and crop.

Prime says, "taking the winter wheat crop as a whole, it still maintains its high average of condition. No further reports of damage by the Hessian fly.

LATE PATENTS

Issued on November 18, 1890.

BALING PRESS.—Peter K. Dederick, Loudonville, N. Y. (No model.) No. 440,790. Serial No. 265,852. Filed March 1, 1888.

BALING PRESS.—Peter K. Dederick, Loudonville, N. Y. (No model.) No. 440,701. Serial No. 349,107. Filed Sept. 15, 1888. Renewed April 23, 1890.

SEPARATOR FOR COTTON-SEED OIL MILLS.—Marshall Wallace, Little Rock, Ark. (No model.) No. 440,981. Serial No. 355,639. Filed June 16, 1890.

POWER TRANSMITTING MECHANISM.—Warren S. Belding, Chicago, Ill. (No model.) No. 440,688. Serial No. 341,126. Filed Feb. 24, 1890.

SCALE BEAM FOR GRAIN WEIGHERS.—Charles H. Cooley and Francis H. Richards, Hartford, Conn., assignors to the Pratt & Whitney Company, same place. (No model.) No. 440,740. Serial No. 330,405. Filed Nov. 15, 1889.

SEPARATOR MACHINE.—Noah W. Hoff, Manchester, Mich. (No model.) No. 440,634. Serial No. 296,349. Filed Jan. 14, 1889.

GRAIN WEIGHING MACHINE.—Charles H. Phillips, Boston, Mass. (No model.) No. 440,794. Serial No. 325,040½. Filed Sept. 25, 1889.

Issued on November 25, 1890.

AUTOMATIC FANNING MILL.—George J. Schlosser, Leadville, Col. (No model.) No. 441,331. Serial No. 351,602. Filed May 13, 1890.

DRIVING BELT.—Charles H. Douglas, Chicago, Ill., assignor of part to Marquis F. Seely, Fremont, Neb., and Dayton, Poole & Brown, Chicago. (No model.) No. 441,359. Serial No. 273,549. Filed May 11, 1888.

GRAIN MEASURE.—Marshall A. Harmless, Schell City, Mo. (No model.) No. 441,302. Serial No. 355,570. Filed June 16, 1890.

AUTOMATIC GRAIN WEIGHING MACHINE.—William T. Black, Crittenden, Ill. (No model.) No. 441,225. Serial No. 354,426. Filed June 6, 1890.

ELEVATOR APPARATUS.—Eckley B. Cox, Drifton, Pa. (No model.) No. 441,288. Serial No. 354,542. Filed June 7, 1890.

Issued on December 2, 1890.

AUTOMATIC GRAIN SCALES.—Thomas F. Gray, Monroeville, O. (No model.) No. 441,658. Serial No. 349,999. Filed April 30, 1890.

REGISTER FOR GRAIN MEASURES.—John H. Lowery, Wilson, Mich. (No model.) No. 441,678. Serial No. 321,429. Filed Aug. 20, 1889.

GRAIN TALLY AND REGISTER.—Samuel R. Wheeler, Detroit, Mich. (No model.) No. 441,912. Serial No. 356,379. Filed June 23, 1890.

COCKLE SEPARATOR.—Frederick W. Howell, Buffalo, N. Y., assignor to Margaret T. Howell, same place. (No model.) No. 442,051. Serial No. 244,071. Filed July 12, 1887.

MACHINE FOR BREAKING SHELL CORN.—Albert Ball, Claremont, N. H. (No model.) No. 442,086. Serial No. 90,119. Filed March 31, 1883.

Issued on December 9, 1890.

PULLEY COVERING.—Frederick Latulip, Syracuse, N. Y., assignor of one-half to George B. Leonard, same place. (No model.) No. 442,124. Serial No. 331,503. Filed Nov. 23, 1889.

GRAIN METER.—Frank Orr, East Springfield, O. (No model.) No. 442,134. Serial No. 357,852. Filed July 5, 1890.

GRAIN ELEVATOR.—Daniel Wilde, Washington, Ia. (No model.) No. 442,159. Serial No. 318,537. Filed July 24, 1889.

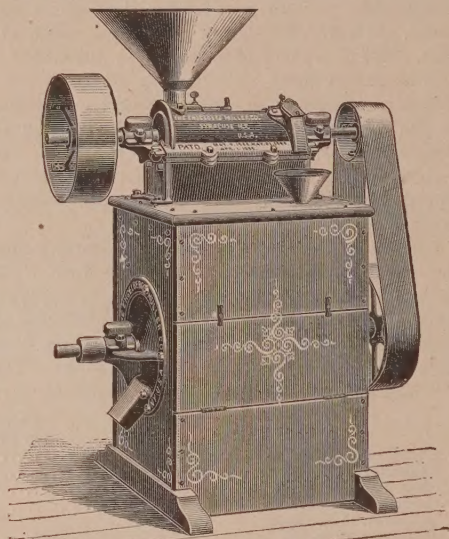
BAG HOLDER.—Andrew P. O'Brien, Richmond, Va., assignor of one-half to Augustus D. Ledoux, same place. (No model.) No. 442,537. Serial No. 361,281. Filed Aug. 7, 1890.

The crop of fall wheat, spring wheat and barley is not up to the average in Ontario. The two-rowed barley has been found by many to be no better than the six-rowed variety, and besides it takes a week or ten days longer to mature.

The receipts of winter wheat at Chicago during November, 1890, were 1,720 cars, of which 1,295 cars were No. 2, 361 cars No. 3, 49 cars No. 4, and 15 cars no grade; against 1,293 cars, of which 72 were No. 2, 843 were No. 3, 342 were No. 4, and 36 no grade, for the same month of 1889.

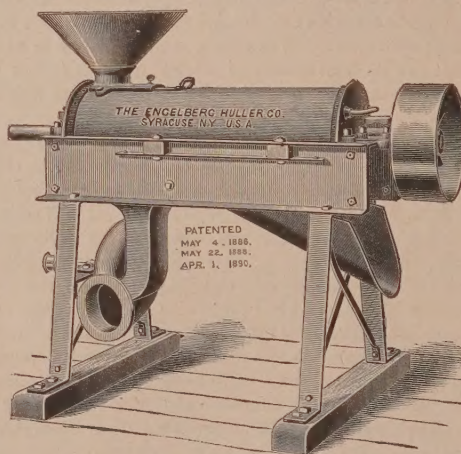
RICE HULLING AND HULLERS.

In an interview with Messrs. Dan Talmage's Sons, whose experience in the handling of rice for all the markets of the world, they are reported as making in substance the following statement: "The only reason, in our opinion, for the limited growth of rice in many tropical countries is the want of cheap facilities for cleaning the same. Heretofore it has cost so much to properly equip a rice mill in any of the South American countries that only men of large capital could afford to own them. Such mills as these have been generally built in the United States, transported to wherever required, and there erected at great expense, after which skilled labor retained at high wages to come out with the mill, must remain for a time at least to operate the same. There is no good rea-



THE ENGELBERG RICE HULLER.

son why the islands of the West Indies, and in fact all countries lying between 30 degrees north and 30 degrees south latitude, should not only produce all the rice which they need for home consumption, but besides, a large surplus for export to this country. Instead, however,



THE ENGELBERG RICE HULLER.

they now buy of the East Indies' sorts from one to two million sacks of rice annually at a cost of five to ten million dollars, exclusive of the import duties.

"During the past twenty-five years we have had numerous inquiries for rice mills suitable for plantation use, and until the present time we have not been able to recommend any one of the many devices offered for this purpose, as they either cost too much, or were too complicated for ordinary men to run, and consequently in constant need of repairs, for which in many countries they have neither the facilities nor the skilled mechanics. We have recently, however, had brought to our attention by the Engelberg Huller Co. of Syracuse, New York, U. S. A., a mill which we can recommend as in every way suitable for both small and large plantations. This machine will take the grain after it is threshed and fanned, and in one minute turn it out ready for the market. It is light, durable, simple in construction, and easily operated, and will clean from 350 to 600 pounds per hour, while the price at which it is sold is such as to bring it within the reach of every planter. In addition to the clean rice for commercial purposes, the meal that is made by it in the process of cleaning is of great value for feed-

ing cattle, consequently such a machine can be of great service in the countries where rice is grown."

Accompanying is an illustration of the Engelberg Huller and Polisher, the size of which is 24x26x52 inches, and weight 600 pounds. The manufacturers claim that it is the only machine that will take rough rice, and in one operation make it marketable. For simplicity, durability and economy we believe it has no equal. Only from six to eight horse power is required run it. When properly adjusted, all kinds of rice are milled equally well by it, the breakage reduced to the minimum, and consequently it gives a much greater yield of whole rice.

The capacity of this mill is surprising to all who have inspected it. It will hull and polish from 75 to 100 bushels of rough rice in ten hours, according to the condition of the grain. It also hulls with equal facility all kinds of grain that may have been mixed together. Any machine that does this amount of work per hour, and does it satisfactorily, must be acknowledged as having extraordinary merit. This fact, which is fully attested to by those who are using them constantly, recommends the machine more highly than anything we might say, in a much longer notice.

At the office of the Engelberg Huller Co. may be seen a large number of letters received by them from their customers in all parts of the world, expressing both surprise and satisfaction at the workings of this machine. One of these correspondents says: "I find my huller pays me better than my corn mill and cotton gin combined, while the fact of my having purchased this huller has occasioned an increase in the acreage of rice in this country fully 50 per cent."

Messrs. Dan Talmage's Sons, who are using a large number of the Engelberg Rice Hullers at their mills in this city, after speaking in terms of highest praise of the same, add: "The machine in operation will speak for itself, needing no commendation outside of the work it will do."

Among the lists of letters we observed one from the Chinese Consul in this city, recommending the huller to his friends in China. Several from different parties in Mexico, among whom we notice the following well-known names: Mr. M. Stettner, Guadalajara; Messrs. J. Arce & Co., Messrs. Marshall & Co., Messrs. Seeger, Guernsey & Co., Messrs. Robert Boker & Co., Messrs. Read & Campbell, Mexico, and Mr. Miguel Gomez, Zapotlan.

All of these correspondents speak in such terms of the efficiency of this machine as to leave no doubt in our minds as to its being all that is claimed for it by the manufacturers, namely, a machine which, considering its size, durability and cheapness, far surpasses anything yet placed upon the market, and fully meets the want which has long been experienced by rice growers in foreign countries; for a good, cheap rice huller and polisher, one that will not cost more than they, in their individual capacities, can afford to pay.

Mr. Richard Bennett, who for the past thirty years has been striving to invent some such cheap process for cleaning rice as would take the place of the slow and ponderous pestle and mortar which is still in general use in tropical countries, says: "The Engelberg Huller, for its simplicity, easy adjustment, durability, capacity, and quality of work, surpasses all others, and is the only practical machine of the kind known for cleaning rice."

The ENGELBERG HULLER CO., have opened an office at 107 Liberty St., New York, under the management of Mr. William C. Brown, who will be pleased to furnish all who may be interested to know more about this machine full particulars regarding the same, and the services which it is rendering the growers of rice in this and other countries.

Their huller for millers' use, which takes the place of stones, has such comparative merits as render it of immense value to those who have need of such mills.

A harvesting machine is used in California that cuts, threshes, cleans and sacks the grain in the field, requiring twenty-four to thirty six horses to operate it. In some cases large traction engines are used in place of horse power.

Prime in his late crop report gives the following in regard to corn: "Since the corn crop of the country has been gathered more reports come in every week of the shortness of the crop. Grain dealers report that owing to the high prices of corn now prevailing, very little corn will for this reason be cribbed, but will be shelled out and shipped as fast as it has been received. The South is a very large buyer at the present time of corn and oats."

Queries and Replies.

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 37. Association of Iowa and Nebraska.—Will some one kindly inform me through the columns of the AMERICAN ELEVATOR AND GRAIN TRADE if the grain dealers of Iowa and Nebraska have an organized society? Recently I saw a reference to the Iowa and Nebraska Grain Dealers' Association, but I have not heard of such an association here. I would like also to know the address of the secretary.—N. E. NEBRASKA.

No. 38. Buckwheat for Seed.—Will you please inform me through the columns of the AMERICAN ELEVATOR AND GRAIN TRADE where I can obtain Japanese buckwheat. I have had several inquiries from farmers for it. Heretofore none of this variety has been produced in this county, and the farmers seem anxious to try it. I want nothing but first-class seed, for I want the farmers to succeed with it if possible.—HAWKEYE. *Ans.*—Write to the seed dealers whose advertisements you will find elsewhere in this issue, and if they haven't it they will get it for you.—Ed.

KANSAS BAD CORN CROP.

The completeness of the failure of the corn crop in some parts of Kansas is something to excite wonder. For instance, Ottawa county, which last year raised 3,600,000 bushels, this year reports a crop of only 59,292 bushels. The acreage planted was 70,000, and the acreage harvested 5,000. Decatur county last year raised 1½ million bushels, and this year only 5,400 bushels. Ellsworth last year raised 1½ million bushels, this year 2,139 bushels. Jewell county raised about 8 million bushels, having, with one exception, the largest county yield in the state. This year Jewell returns only 341,000 bushels. Only an eighth of the planted area was harvested. Osborne county last year raised 3,600,000 bushels. This year the crop is reported at 2,730 bushels, with just a tenth of the planted area harvested. Sheridan county last year raised nearly a million bushels. This year she reports 636 bushels on 212 acres harvested out of 21,177 acres planted. Eighteen of the 106 counties in the state raised more than half of the state's crop.

BARLEY CULTURE.

The cultivation of barley, which can be grown between extreme geographical limits, will always be important, as it is an article of food for men and beasts, and is also employed not only in the manufacture of beer but in that of alcohol. The total production of barley in the world, says the *Journal of the Society of Arts* (London) is estimated at 825,000,000 bushels. Of this amount Europe produces from 630,000,000 to 650,000,000 bushels, valued at £160,000,000. The following will show the average production for each country: Algeria, 60,500,000 bushels; Austria-Hungary, 88,500,000; Belgium, 3,665,700; Bulgaria, 15,125,000; Canada, 19,250,000; Denmark, 20,650,000; Egypt, 27,500,000; England, 90,750,000; France, 49,500,000; Germany, 93,500,000; Holland, 4,400,000; Norway and Sweden, 22,000,000; Roumania, 19,250,000; Russia, 129,250,000; Spain, 77,000,000; Turkey, 13,750,000, and the United States, 57,750,000 bushels.

REQUIREMENTS OF A GRAIN BUYER.

It would soon be impossible to find men possessed of the necessary imperturbability to stand the abuse a Northwestern grain buyer has to stand. This year is one which tries the best posted men in buying, so varied are the samples of wheat which come under his hand. A remark was recently made among local grain men that this year a successful buyer would require to possess all the judgment of Solomon, the meekness of Moses, the patience of Job, and the eyes of Argus. Possessed of all these he might, under ordinary circumstances, get along smoothly with his customers and their friends. All these qualifications utterly fail to keep him out of a continual state of wrangle and torment.—*Commercial, Winnipeg.*

Points and Figures.

The wheat crop of Washington is the largest in the history of the state, being estimated at 16,000,000 bushels.

L. Cortelyou, Muscotah, Kan.: "I consider the AMERICAN ELEVATOR AND GRAIN TRADE of great value to all elevator owners."

Rice is the main food of 470,000,000 persons, or more than one-third of the whole human race, and it enters largely into the diet of the remainder.

The Chicago elevators had in store 1,797,992 bushels of flaxseed Saturday, Dec. 6. On the Saturday previous 1,772,229 bushels of flaxseed were in store.

The flax crop of Missouri this year is reported at 405,000 bushels. Secretary Mohler of Kansas reports the flax crop of that state this year at 2,173,000 bushels.

An Eastern exchange says Michigan is the only state that will thresh any considerable amount of cloverseed this year, and that its output will be below the average.

The exports of clover seed from New York for the week ending Nov. 29, were 1,582 bags. From Sept. 1 to Nov. 29, 24,342 bags, against 13,950 bags for the same time in 1889.

Elevator and grain men should not think of commencing a new year without subscribing for the only paper devoted to their interests, the AMERICAN ELEVATOR AND GRAIN TRADE.

Over 12,000,000 bushels of wheat of this year's crop will be taken out of the country west of Winnipeg by the Canadian Pacific. Last year 7,000,000 bushels was shipped from that section.

The Tennessee corn crop is 55,269,865 bushels, of which 37 per cent., or 20,000,000 bushels, is unmerchantable. There is a decrease of 10 per cent. in the area sown to wheat less than last year.

The receipts of flax seed at Chicago in November of 1890 and 1889 were 1,162,000 bushels and 625,000 bushels respectively. The shipments in the same month of 1890 and 1889 were 703,476 and 631,211 bushels respectively.

The *Moose Jaw Times* supports the *Nor-West Farmer's* demand that the farmers who produce the grain have some voice in the fixing of standards. The father of the farmer who produced the seed should also have something to say in this matter.

During the first eleven months of 1890 Chicago received 6,759,000 bushels of flaxseed, against 3,218,000 bushels in the same months of 1889. The shipments amounted to 4,271,099 bushels, against 2,789,483 bushels for the eleven months ending Nov. 30, 1889.

The Iowa Railroad Commissioners are having much tribulation with the Chicago, Milwaukee & St. Paul Railroad. They have more actions in court against that road than all the others. The Milwaukee doesn't agree with the commission in anything.

Baltimore exported from Jan. 1 to Dec. 4, 1890, 18,495,062 bushels of corn, 4,614,523 bushels of wheat and 2,540,381 barrels of flour, against 14,579,053 bushels of corn, 4,444,557 bushels of wheat and 2,108,992 barrels of flour during the corresponding period of 1889.

America in the old days on the slightest provocation would let wheat down with a run in Chicago to 70 cents or under. Last week she passed through the severest financial panic of modern times, and the panic price of wheat proved to be 90 cents.—*Liverpool Corn Trade News.*

A number of prominent people were credited with being thankful on Thanksgiving Day by the *Chicago Evening Journal*, which said, Chief Grain Inspector P. Bird Price is thankful because his office is one of the best managed institutions in the land of the free and the home of the brave.

The business men of Grand Forks, N. D., in a meeting Dec. 6, protested against the appropriation by Congress of \$500,000 for the destitute people of that state, as the Red River Valley this season produced 25,000,000 bushels of wheat. They claim that North Dakota is able to take care of all its needy.

Secretary Mohler of the Kansas State Board of Agriculture has received reports from every county in the state, showing the wheat yield for 1890 to be 28,801,214 bushels, 800,000 of which is spring wheat. The acreage sown was 2,700,000. The yield last year was 35,000,000 bushels. Secretary Mohler says that more flour will be

produced from this year's yield than from last on account of the excellent quality of the wheat.

The Attorney-General of Iowa has filed in the District Court petitions in equity in behalf of the state against the Chicago & Northwestern, the Chicago, Rock Island & Pacific, the Chicago, Burlington & Quincy and the Chicago, St. Paul, Minneapolis & Omaha Railroad for violating the joint freight rates made by the Railroad Commission.

The wheat situation in Washington and Oregon is said to be an unfortunate one for the producers. Trade has been greatly embarrassed for want of cars to move the crop. It is claimed that there is a railway and elevator combine to secure the crop and then move it. Prices at the principal points are 42 to 43 cents per bushel.—*Chicago Daily Business.*

Chicago shipped in November 427,492 barrels of flour, 1,480,280 bushels of wheat, 4,182,275 bushels corn, 5,223,335 bushels oats, 284,455 bushels rye, and 1,770,925 bushels of barley, against 564,612 barrels flour, 1,354,513 bushels wheat, 5,090,542 bushels corn, 5,264,768 bushels oats, 368,426 bushels rye, and 1,373,583 bushels of barley, in November last year.

Chicago received in November, 1890, 425,446 barrels of flour, 1,978,542 bushels of wheat, 2,895,916 bushels corn, 4,485,530 bushels oats, 221,846 bushels rye, and 2,204,212 bushels of barley, against 555,701 barrels flour, 2,901,772 bushels wheat, 4,276,479 bushels corn, 3,394,199 bushels oats, 299,963 bushels rye, and 1,906,388 bushels of barley during the same month in 1889.

The mutual insurance companies of the West are having a hard time of it, the immediate result being the withdrawal from business of a large number of them. There are a number of excellent mutual companies, but they confine themselves to a limited territory and are not seeking an extended business. Those that have attempted it have come to grief.—*Cincinnati Price Current.*

The F (ollow) M (y) B (rother's) A (dvices) cranks want "gambling" in grain stopped. Yet the farmers themselves speculate in grain as much as any class. Many of them hold it long after it comes into their possession for a rise in the market price, and others ship it to a grain center and store it. The grain dealers who do likewise do not produce the grain, but they pay the farmer for so doing.

Secretary Mohler of the Kansas State Board of Agriculture, has requested Prof. Snow of the State University, to investigate the reports of damage to wheat by the Hessian fly. "The fly seems to have appeared in all sections of the state," said Secretary Mohler, "and it is especially bad in the wheat sown early. If warm weather continues the damage will be serious, but a cold snap will save the crop."

DECEMBER CROP REPORT.

In his report of Dec. 10 Statistician Dodge of the Agricultural Department says the present corn crop is worth more than the last, and farmers will receive more for it. Unfortunately districts of failure do not realize their portion of the advance in average values. The average price by present returns is 50.1 cents per bushel, against 28.3 cents for the crop of 1889. It is the highest December price of the decade except that of 1881. The present average shows that small crops are a sure cure for low prices, and that the law of demand is still the main factor in making prices and profits. The prices in the seven corn surplus states are: Ohio, 51 cents; Indiana, 47; Illinois, 43; Iowa, 41; Missouri, 44; Kansas, 51; Nebraska, 48.

The average farm value of the wheat crop, as estimated, is 84 cents per bushel, against 69.8 for 1888.

The price of oats has responded sharply to the pressure of a small crop and increased demand because of a short corn crop. The average is 42.2 cents, against 23 cents last year. It is the highest reported since 1881.

Rye, like oats, at 62.9 cents, is higher than since 1881, and the same is true of barley at 64.8.

Buckwheat at 57.7 marks an advance over last year, but is lower than in 1888.

The deficiency in the potato crop has caused an advance in values in all sections of the country. The average is 77.7 cents, an increase of more than 90 per cent. over the prices of the past two years.

Hay alone of all farm products records a decline from last year. The present price is \$7.74 per ton, and the slight falling off is due to the increased product.

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HARLEY B. MITCHELL, - - - Editor.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., DECEMBER 15, 1890.

INSPECTION LAW FOR KANSAS.

To add to the number of grades and inspections of grain already in the West, it is proposed to establish state inspection of grain in Kansas.

The *Champion* of Atchison says: "Atchison grain dealers generally favor the passage of grain inspection law, similar to the one in force in Missouri and other states, and as the need of such a law is felt all over the state, the legislature will probably take some action on the matter at the coming session. The law provides commissions for the inspection and grading of grain in elevators and warehouses. An Atchison grain merchant says that while such a law might not increase the market for grain at this point, it would be of undoubted benefit, from the fact that it would give the grain shipped from here the prestige of state inspection, which will stand in any market in the country. The law, he says, seems to work well in Missouri. Kansas City grades now stand without question in the St. Louis market, something unheard of before the law was passed in that state."

It seems that instead of striving for uniformity and simplicity of grades the trade is tending toward multifarious grades and inspections. The establishment of public elevators and official grades and inspection at Atchison might enable that city to become a stronger competitor of Kansas City for the grain trade of the state, and it might advance the grain trade of Wichita, which always has been ambitious to become a great grain center.

The success of such a move, however, is entirely problematic and would depend principally upon the acceptance of the grades to be established, and the inspection by the dealers without the state as well as those within. Much of the grain that now goes to Kansas grain centers on its way to the consumer would not go there if an inspection unsatisfactory to dealers was pushed upon them and hence it would prove detrimental to these centers. The dealers of the state would gain little if anything, for, of the grain shipped out of the state most of it would have to be re-inspected and of that sold within the state most of it would be sold by sample or after the would-

be buyer had personally inspected it; hence an inspection within the state would only prove useless and be an unjust tax upon the trade.

If the Missouri or Illinois grades were established in Kansas, Atchison, Wichita, or Topeka grades might then be accepted by the grain inspectors of the state whose grades had been adopted but not otherwise. Kansas City grades are accepted at St. Louis because the same state grades are in force at both places and the inspectors are employed by the same department. Multiplicity of grades and inspections only retards trade, uniformity and simplicity facilitates and adds reliability.

LAKE COMMERCE.

Few persons are aware of the enormity of our lake commerce, of the rapid increase in the number of first-class vessels, and the enormous increase during the last few years in the amount of freight carried. The great and rapid growth of lake commerce during the last five years is truly wonderful, but what is still more amazing is, that despite the great increase in the registered tonnage, new boats of improved design are constantly being erected and the demand for shipping room increases still faster.

The fleet for 1890 consisted of 2,055 vessels of 826,360 registered net tons, and valued at \$58,128,500. Of these 1,153 are steam, with 523,702 tons registered burden, and worth \$48,434,350. The steam tonnage of the lakes is now greater than that of the entire Atlantic coast, becoming so this year for the first time. The lake fleet has nearly doubled in value in the last five years, and a remarkable change has occurred in the type of vessels used. In 1886 there were 21 steamers of 1,500 or more net registered tons each, now there are 110. Then there were six steel vessels valued at \$694,000, now there are 68 valued at \$11,964,500. The carrying business of the lakes has increased even more rapidly than the tonnage owing to a great gain in the speed of vessels, due to the introduction of triple expansion engines of high power and great improvements in the facilities for loading and unloading.

In no line of business has lake transportation been a more influential factor in reducing freight rates than in the grain trade. The traffic being so great in itself is worth fighting for, and there has been a constant fight between the lake carriers and the railway companies to secure it.

The lake carriers have taken the bulk of the grain shipped from cities on the lakes, and at some points it is stored all winter to get advantage of lake rates in the spring. Eventually little grain will be shipped during the season of navigation to the Atlantic coast from ports on the western lakes by rail.

During the season just closed the shipments from Chicago included 6,310,071 bushels of wheat, 56,758,466 of corn, 18,260,294 of oats, 3,000,000 bushels of rye and barley and 1,726,485 barrels of flour.

Late advices from Duluth show that during the season just closed, which lasted from the last week of April to Nov. 29, were as follows: Flour, 2,496,000 barrels, a gain of 200,000 barrels over the shipments of 1889; wheat, 13,573,341 bushels, and corn and other grains, 2,000,000 bushels. Arrivals at the port of Duluth for the season were 1,268, and the departures, 1,272. Tonnage, arriving and departing, amounted to 2,739,287 tons, against 2,475,195 in 1889. This is the biggest record ever made here. Nearly 10,000 vessels arrived and departed from Chicago.

The steam tonnage inspected on the lakes for 1889 was 515,419 tons, while that on the Atlantic coast only amounted to 506,863, and on the Pacific and Gulf coasts and the Western rivers a total of only 368,102 tons. The value of the freight carried on the lakes last year is estimated at \$305,432,041, and it was carried an average distance of 566 miles, or 15,518,360,468 tons were carried one mile at a cost of 1½ mills per ton per mile. This is 22½ per cent. of the freight carried on all the railroads of the United States during 1889. It is estimated that it would have cost shippers \$119,801,743 more to have shipped this

enormous amount of freight by rail than it did cost them to ship it by water.

These facts surely justify the making of many improvements in the harbors, in the channels connecting the lakes, and at every point which will advance the interests of lake commerce.

CHICAGO INSPECTION DEPARTMENT.

Elsewhere in this issue we give a summary of the twentieth annual report of the Chief Inspector of Grain at Chicago, which all dealers will do well to peruse. It shows that although more grain was received at Chicago than ever before, there was less dissatisfaction with the work of the department. Appeals from the inspectors' decisions fell off over 50 per cent. from the preceding year. This great reduction in the number of appeals in the face of unprecedented receipts shows that the Chicago Inspection Department has been doing excellent work.

Chief Inspector Price is ever on the watch to increase the efficiency of his department. By the aid of vigilant supervising track inspectors he has been able to give better service. Whenever he has learned that track inspectors were in any way to blame for shortages in shipments, he has immediately taken steps to remedy the evil. In several of the yards where it was customary for the inspectors to leave the cars open after inspecting the grain, the doors are now fastened shut, because it was learned that sneak thieves had been helping themselves. He has also issued strict orders that all boards which are removed from the doorway, in order that the grain can be inspected more easily, shall be carefully replaced as soon as inspection is completed. This in most cases will prevent the grain from being thrown out of the car while it is being switched about the city.

The unusually large receipts of grain, of course, resulted in a large increase in the cash receipts of the department and made it possible for a further reduction in the charge for inspection. Since Dec. 1 the fee for in-inspection has been only 25 cents per car. When we take into consideration the fact that grain cars are constantly being enlarged and the fee for inspection reduced, we find additional evidence of efficient and economical management. The expense of managing the department was only 41-100 of a mill per bushel, a fact New York and New Orleans inspectors will do well to ponder over.

FARMERS AS LEGISLATORS.

In several states the farmers have a working majority, and as heretofore they will try to reform everything and regulate all lines of business to advance their own interests at the cost of others. The business men who handle and buy grain will of course receive more attention than any other class, and must expect to have many unjust, unreasonable and unconstitutional laws passed for the regulation of themselves and their business.

Farmers have a majority in the North Dakota legislature, and among many bills they propose to pass in the interest of the farmer are a number dealing with the warehousing and transporting of grain. That the legislature will succeed in proving to the public that it is just as capable of dealing with the elevator and grain interests of the state as its predecessor, is doubted by no sane person. Its actions will be guided by the same principles as its predecessor—self-interest and prejudice to the interest of all but the farmers. Where the representatives of a class are in the majority, class legislation will result. The first part of the session may be (it surely ought to be) consumed in repealing the unconstitutional laws passed at the last session, and the remainder of the session will be given up to discussing and enacting more unconstitutional laws for the regulation of elevator men and grain buyers.

In Nebraska matters are worse. The farmers have a majority in both houses, and claim the alliance candidate is elected governor. All are new and untried men, and have not had even one year's experience at enacting unconstitutional

laws to guide them. That the legislature will devote a good share of its time enacting just laws for the advancement and protection of the elevator and grain interests of the state is doubted seriously.

Many bills providing for sweeping "reforms" will undoubtedly be introduced in the Kansas legislature also, but as the farmers only have a majority in one house, it is not probable that any bills containing the unreasonable, cranky ideas of the alliance will become laws. They feel that radical legislation is absolutely necessary, but as yet they have no clearly defined ideas as to what they want.

RAILROAD DISCRIMINATION AT BALTIMORE.

Since the railroad companies organized the Baltimore & Washington Car Service Association, the grain dealers of the former city have been forced to fight to secure any recognition whatever of their just rights. One of the severest blows dealt Baltimore dealers was a reduction in the time allowed for unloading cars loaded with grain, hay, straw, etc., to forty-eight hours. The dealers protested so strongly that the time was increased to four days from arrival, but for remuneration of itself the association meekly refrains from notifying consignees of arrivals until the cars which the companies need so badly have stood on the track from one to three days. This same association permits all goods in transit or for transfer to water-lines to remain in cars as long as is desired, and without charge.

In Philadelphia and several other cities sheds and warehouses are provided where these commodities can be stored for more than four days without charge, and can remain as long as consignee desires at a low rate of storage. In this way the railroad companies' cars do not stand idle so much, and the dealers are not forced to sacrifice their goods in order to sell.

The association discriminates against the local dealers, and the companies composing it discriminate against Baltimore. A committee of the Corn and Flour Exchange demanded, but in vain, that these merchants should be justly and fairly treated. The Exchange, recognizing the outrageous injustice did its members, have appointed a committee to hear all complaints against the association, and employ counsel and defend the rights and interests of the members in the courts.

Merchants in a number of our cities have learned that to peacefully submit to the outrageous impositions of the railroad companies serves only to bring down upon themselves greater and more exasperating impositions. They who wish to secure just and fair treatment must stand and fight together.

A QUEER SUGGESTION.

For some time an attempt has been made to secure in some way a uniform grading, or rather a uniform Government standard, for grain. Most of the suggestions were very crude, and required an exercise of Government power which is repellant to the ideas of most Americans. Finally, however, these schemes and suggestions have crystallized in a form that to us seems unobjectionable. If impracticable, it matters not; for the scheme does not meditate abolishing anything or interfering with anything. It does not interfere with the standard grades established at Duluth, St. Louis, Chicago, Baltimore or New York. It does not establish an inspection department. It simply provides that the Department of Agriculture shall establish certain Government grades, and leaves the individual to buy and sell by those grades, or not, just as he chooses. If he wants to buy wheat or corn by Chicago inspection, he can do so; the plan proposed makes nothing compulsory. It only provides that if the miller in New York wants to buy of the farmer or grain dealer in Illinois or Nebraska, he can do so, without the grain going to Chicago or St. Louis or elsewhere for inspection. The scheme may not be practicable; but if found impracticable it

would do no harm, because people would simply refuse to buy or sell by it, and as its use would not be compulsory, that would be the end of it. The simple fact is that some farmers, some millers and some dealers believe the plan would be a good one, and bring them all closer together without the intervention of the various inspection departments. And here is the queer suggestion; it is from an Eastern paper:

It follows from the above that to establish national standards, fair in all seasons and applicable in all parts of the country, is a difficult and never-ending task. Such standards must reflect the consensus of current opinion in all markets—opinion formed by the contact of producers and dealers. While it is possible, therefore, to establish national standards, it is manifestly not possible to do so through a government bureau. The work can only be done in one way, namely, by a national convention of the grain exchanges. Competent representatives of every grain exchange in the land should hold annual meetings, and to their hands the task of determining uniform standards should be committed, with power to make their decisions binding. They should assemble after the harvests and revise the grades for each season, their action being based on crop samples.

That is to say, that as farmers and grain men and millers are dissatisfied with the grading and inspection of the different boards, the matter could be satisfactorily settled by letting these different boards fix up a standard to suit themselves. Verily we have no comment to make. Language fails us.

PAYING ELEVATOR MEN.

President Egan of the Chicago, St. Paul & Kansas City Railway Company, has been indicted by the United States Grand Jury for giving rebates. If the charge is based upon the transaction Mr. Egan says it is the indictment should be immediately recalled and country elevator men doing business along this line instructed to sue the company for the same rebate given to the favored shippers.

Mr. Egan says that he supposes the Grand Jury's action is based upon some transaction his company had where there was no intention whatever of violating any law. These transactions were a permission given by the railroad company to a firm to build grain elevators at local country stations where such facilities did not exist. Any percentage allowed them, therefore, was in lieu of elevator charges and could not otherwise be construed.

For years before the date the Inter-State Commerce Law went into effect, it was customary with many of the railroad companies to give grain shippers who owned elevators a lower rate than track shippers. Then no one thought of denying the elevator men a small recompense for providing storage and handling facilities. To facilitate the shipment of other freight, railroad companies not only erect warehouses and platforms, but provide all the necessary utensils for loading and unloading it and also employ men to do the work. If the railroad companies do not provide equal facilities for the storing, receiving and shipping of grain, they perpetrate a gross discrimination against the grain trade.

Some companies, notably the Lake Shore & Michigan Southern, recognizing the injustice of the discrimination against the grain trade, have erected elevators along their lines and employed men to take charge of them and receive all grain offered. This has proved unsatisfactory in most cases for the company could not afford to employ a man the year round, neither were the men employed competent to distinguish between good and bad grain and mixed all together. Despite the fact that the service rendered was greatly inferior to that obtained at elevators operated by experienced grain dealers, the cost of the service to the railroad company was enormous as compared with any salary ever paid an elevator man in the shape of rebates and lower rates on grain shipped through his house.

Knowing this, some of the companies have wisely preferred to pay the country elevator man who does the work and provides the facilities for handling the grain, a small fee of so much per bushel. This is the best way to secure good service at a minimum expenditure; but all country elevator men should be treated alike, none should

be discriminated against. One great point to recommend this method of securing elevator service to railway companies is that they pay only for what they get. If the law forbids this method of obtaining and paying for this service as the Grand Jury seems to think, then it is a decidedly unjust law and should be repealed immediately.

A QUESTION FOR THE SUPREME COURT.

The cases recently decided in this city by Judges Blodgett and Gresham are on the way to the Supreme Court of the United States. Mr. Counselman is the senior member of the Board of Trade firm of Charles Counselman & Co., and Mr. Peasley is treasurer and vice-president of the Chicago, Burlington & Quincy Railroad Company. Both were subpoenaed before the Federal Grand Jury to give testimony in regard to alleged violations of the Inter-State Commerce Act. It was expected that if the Grand Jury could get at the facts, as shown to Mr. Counselman, it would be found that rebates contrary to law had been allowed. Mr. Counselman pleaded as his excuse for refusing to testify that he might criminate himself, but Judge Gresham points out the law forbidding the use of one's own testimony for any such purpose. Mr. Peasley's case was not exactly the same as that of Mr. Counselman, as he held that his testimony might criminate the company which he serves. And now it remains to be seen whether the Supreme Court will sustain the district and circuit judges. If the courts are powerless to compel answers, the law will prove of no effect, as convictions could rarely, if ever, be secured by simple circumstantial evidence.

OUR CUSTOMS OFFICERS IN CANADA.

Among our communications in this issue is a letter from C. F. Harrington of Port Huron, Mich., in which are cited various good reasons why freight for transit through contiguous foreign territory should be loaded, bonded, sealed and manifested in this country.

The placing of our customs officials just across the Canadian line makes possible the transfer of American business to Canada. It places Canadian elevator men and all employed in receiving and handling the traffic on an equal footing with their competitors on this side of the line. In other words, the Secretary of the Treasury has gone out of his way to give Canadian capital and labor an opportunity to compete on equal terms with American capital and labor for American business.

If the officials were on this side of the line it would be necessary to handle, store and seal the freight on the American side. Grain and flour constitute the bulk of the East-bound freight that would be affected by a change, and we doubt not that all grain dealers will, in a patriotic sense of view, be in favor of withdrawing all officials whose being stationed in Canada diverts American business from American cities to Canadian cities just across the line, as is the case at Port Huron and Detroit.

The business that goes by way of Georgian Bay could not be loaded in cars and sealed at any nearby point in this country, so it would be better for the Western shippers if the customs officers were allowed to remain at points on the Georgian Bay. The Grand Trunk Railway Company can undoubtedly transfer its warehouses and elevators across the river to Port Huron and handle, store and load the grain as cheaply as it now does. If it can we see no reason why the Chicago Board of Trade should object to the customs officer at Sarnia being withdrawn and the business transferred to American soil.

The Iowa, Minnesota and Dakota Elevator Company, operating a line of warehouses on the Burlington, Cedar Rapids & Northern Railroad, made an assignment Dec. 13, with liabilities amounting to \$150,000.

Grain Dealers' Associations.

KANSAS AND NEBRASKA GRAIN DEALERS' ELEVATOR ASSOCIATION.

President, MASON GREGG, Lincoln, Neb.; *Vice-President*, FRANK LOWER, Council Grove, Kan.; *Secretary*, W. T. CATWOOD, Chifton, Kan.; *Treasurer*, O. A. COOPER, Humboldt, Neb.

GRAIN SHIPPERS' ASSOCIATION OF NORTH-WEST IOWA.

President, T. M. C. LOGAN, River Sioux; *Vice-President*, H. HANSON, Odebolt; *Secretary and Treasurer*, F. D. BABCOCK, Ida Grove; *Assistant Secretary*, F. G. BUTLER, Schaller.
Executive Committee, E. A. ABBOTT, Des Moines; J. Y. CAMPFIELD, Sac City, and T. M. CATHCART, Kingsley.

GRAIN DEALERS' ASSOCIATION OF OHIO.

President, J. W. McCORD, Columbus, Ohio; *Vice-President*, L. BOGGS, Kingston; *Secretary*, E. C. WAGNER, Columbus; *Treasurer*, D. McALLISTER, Columbus.
Board of Managers, C. D. MILLER, Newark; DILL WEIGAND, South Bloomfield; E. M. BENNETT, JR., Urbana; C. W. PRINGLE, Lilly Chapel, and H. CHAMBERS, Worthington.
Legislative Committee, J. W. McCORD, D. McALLISTER, E. C. WAGNER, W. A. HARDESTY, and E. C. BRACHALL.

ILLINOIS GRAIN MERCHANTS' INSURANCE AND PROTECTIVE SOCIETY.

President, ISAAC VAN ORDSTRAND, Hawarden; *Secretary*, S. K. MARSTON, Olathe; *Treasurer*, JOHN STEWART, G. C. McFARLAND, Havana.
Executive Committee, S. K. MARSTON, D. H. CURRY and F. M. PRATT.
Committee on Claims, D. M. BRUNER, J. F. ZAHN, H. C. MOWREY.
Committee on Legislation, W. ARMINGTON, V. R. ST. JOHN, C. C. ALDRICH.

EDITORIAL MENTION

THE Michigan State Grange, at its annual session, sat down very heavily on the pawnshop warehouse bill.

THE Chicago & Northwest Granaries Company has declared a dividend of 8 per cent. on the preferred and 10 per cent. on the common stock, leaving a balance on hand of nearly \$6,700.

THE Chicago Board of Trade is just now torn with debating debates as to whether the wires shall be brought back or not. The coming election will involve this point as one of its issues.

THOSE who wish to be happy, live long and be successful in the elevator or grain business should immediately subscribe for the AMERICAN ELEVATOR AND GRAIN TRADE, only one dollar per year.

THE directors of the Milwaukee Chamber of Commerce have adopted a rule prohibiting the reinspection of grain after it has gone into store in a regular elevator. This is to prevent grain being "graded up" after it has been placed in store.

J. L. OWENS of J. L. Owens & Co., Minneapolis, manufacturers of the dustless grain and flax separators, made us a pleasant call recently. Mr. Owens said that business was excellent with his company, and that their machines are continually gaining new friends.

BUFFALO has had considerable trouble in securing the delivery of shipments, and the dealers claim that the demurrage charges have not made cars any plentier or have the railroad companies delivered shipments more promptly. The Mer-

chants' Exchange has taken unanimous action against the car service association and appointed a committee to secure better service. Shippers do not always permit impositions to be heaped upon them without resenting it.

DULUTH grain men opposed so vigorously the rule requiring that a charge of \$1 should be made for each car held out for sampling or reinspection on the Eastern Minnesota road that it has been rescinded. Such is the fruit of organized opposition to impositions.

THE Grain Receivers' Association of Minneapolis held its first annual election of officers Friday, Dec. 12. The organization has been a success in every way, and has been instrumental in advancing the interests of the local grain dealers in a number of ways.

SINCE election we have not heard a single complaint against the efficient and satisfactory work of the Minnesota Inspection Department. It seems that the political demagogues find fault only when they want a position and can increase their chances of getting a position by complaining.

THE flour and feed men of Duluth have organized an association for the purpose of regulating and protecting their business. It will also regulate prices. They have found that cut-throat competition does not pay, so they propose to work together. Country grain dealers can profit much by taking a similar course.

THE Chicago Board of Trade is still waging war on the bucket shops, but it is still unsuccessful. One of the late moves of the Board was to soap the windows, it having been suspected that quotations were signaled from the window, but even this did not keep the bucket shop men from obtaining quotations, and they are still doing business.

THE Central Traffic Association proposed to require shippers to pay local rates when the destination of freight was changed after it had been shipped. This was strenuously opposed by shippers, and the Chicago committee of the association has decided against the requirement. A great many impositions can be prevented and others ended by the united opposition of shippers.

THE Illinois Railroad and Warehouse Commission has reduced the charge for in-inspection of grain to 25 cents per car. We erroneously stated in our November issue that the reduction made was in the charge for re-inspection. This is the second reduction of 5 cents per car made during the last two years in the charge for in-inspection, and speaks well for Chief Inspector Price's management of the department.

If you have no ink, pen, or paper, hire a pretty stenographer and give us the news and your views on subjects of interest to the trade. Grain dealers and elevator men should be more willing to give others the benefit of their experience and their opinions. Do not be backward about writing; we will enlarge the AMERICAN ELEVATOR AND GRAIN TRADE, if necessary, to accommodate all the communications received.

THE members of the Merchants' Exchange of Buffalo have done little else of late save hold indignation meetings, write letters and devise schemes to learn the name of the author of a letter published in the Commercial over the signature of "Grain Dealer" in which grave charges were made against members, and especially the grain dealers. The Buffalo paper should be forced to give up the name of its letter writer. If the charges are true the public should know it. "Grain Dealer" should be willing to openly inform on wrong doers and should not be afraid to stand up for the right. Charges made by an unknown person from behind a screen convince thinking

people of nothing save that an unprincipled person is intent on doing harm.

KANSAS CITY grain men have declared war against the railroads, and if the charges they make are true, they are surely justified in so doing. They claim that the railroad companies have by means of forged expense bills, false weights and gross rate manipulations, discriminated against them and in favor of a few dealers at that point. The dealers demand an investigation of the charges, and it will in all probability be granted. They should not rest until their just demand is complied with.

WILL the alliance, which now controls the state government of Nebraska, appoint men to officially inspect and weigh grain at every town and city of the state, or will it confiscate the elevators and have them run by the state? The most unreasonable ideas of the craziest reformer may find voice in a law. The elevator men and grain buyers of the state will do well to watch closely their business interests, and to perfect a strong organization that they may offer greater and more influential opposition to unjust bills when introduced.

If the Philadelphia & Erie Railway Company does not change its tactics next season in dealing with the grain trade, grain shippers will be forced to consider a perpetual blockade at Erie and avoid that port when possible. During the last season of navigation grain has been delayed at this port as much as two months, because the company had enough freight, on which it could make a greater profit, to keep all its cars busy. Such treatment will of course drive the trade to take another route to the seaboard, and while reducing the trade of Philadelphia, will also reduce the receipts of this monster railroad monopoly.

THE constitutionality of the McEvoy elevator law passed by the New York Legislature several years ago, and sustained by the State Appellate Court, is soon to be passed upon by the United States Supreme Court. The Buffalo elevator pool has appealed from the decision of the state courts and employed Benjamin F. Tracy to plead the case for them. Canal boat captains and others interested in having elevator charges in that state kept down to a reasonable figure, met in New York City recently for the purpose of devising means for raising funds to pay counsel to represent them at the trial.

Do you sell seeds? If so, do you consider the quality when buying? Poor seeds are the cause of more poor crops than all the atmospheric and climatic changes that occur. It can easily be remedied by writing to Messrs. W. H. Morehouse & Co., Toledo, O., wholesale dealers in grain, clover and timothy seed. Their Anchor brand of choice grade clover, which has been re-cleaned and bulked, is the finest in the market. Also, their orchard and lawn grass, Hungarian, red top and white clover are equally as good. Any one wishing to purchase or sell seeds in bulk should correspond at once with the above named firm.

THE desire for uniformity and simplicity in everything is becoming stronger and stronger in this country. In addition to uniformity of grades, weights, freight classifications, bills of lading and laws regarding bankrupts and marriage, we wish to suggest one which merits the support of all dealers in grain. It is uniformity of the legal number of pounds per bushel of grain. At present it varies in different states. The legal weight of a bushel of shelled corn ranges from 52 pounds in California to 58 pounds in New York; oats, from 30 pounds in Pennsylvania to 34 pounds in Nebraska; barley, from 47 in Kentucky to 50 in California; rye, from 50 in Maine to 56 in Ohio; flaxseed, from 34 pounds in Kansas to 56 in Iowa; buckwheat, from 40 in California to 42 in Minnesota, to 50 in Kentucky; clover seed from 60 in Indiana to 64 in

New Jersey; Hungarian grass seed from 45 pounds in Iowa to 60 in Nebraska, and timothy from 44 pounds in New York to 46 in Wisconsin. Such a great variety of standards in itself accomplishes no good, but holds open the door for misunderstanding and trouble to enter.

A MEMBER of the Boston Chamber of Commerce has a unique plan for securing better transportation service from the railroad companies. His idea is to have the state legislatures pass a law compelling the railroads to move freight in transit 100 miles every 24 hours as the minimum distance, and to compel them to receive freight from connecting roads the same day it is offered. If all the states would follow out this plan, which is very improbable, new cars carrying their first load would reach their destination before falling to pieces, and many shipments which are now delayed for weeks will be delivered in a few days. The state which did not pass the law would be a favorite resting place for through freight.

MANITOBA grain dealers are crying with a loud voice against the Canadian Pacific Railway Company and if the charges they make are true, which is not at all improbable, they surely have just and sufficient cause for attacking the company. Two of Canadian milling companies controlling six of the largest mills in the Dominion are paying such high prices for wheat in the Northwest that all other buyers have been forced to retire from the market. The grain dealers claim that the road must be giving a rebate to these firms, else they could not pay such high prices. Such discrimination should not be tolerated for a minute. The privilege of railroad companies to make or break a man in business should be denied.

A RECENT decision of the Illinois Appellate Court recalls the great wheat panic of 1887. The decision was rendered in the case of O. Gregg & Son vs. the American Exchange National Bank, being a verdict for \$7,000 in favor of plaintiff. During the excitement C. J. Kershaw & Co., the Board of Trade firm, gave on June 15 a check on this bank for \$7,000 to Gregg & Son. The bank refused to certify or cash it, claiming that Kershaw & Co. had overdrawn their account. In the trial it was shown that certain checks were not transferred to Kershaw's account, which in themselves would have been sufficient to satisfy the check. Although the decision of the lower court was affirmed, the defendants immediately appealed.

SOME time ago the Western Freight Association took the initiative step by agreeing to adopt the uniform classification of freight Jan. 1, 1891, if the other associations adopted it and the railroad commissioners of the states in which they operated authorized it. The railroad commissioners of Illinois have done more than authorize it; they have ordered all roads doing business in the state to put the uniform classification of freight into effect Jan. 1. This will affect Eastern as well as Western roads, and will undoubtedly bring about the eventual adoption of the uniform classification of freight. Several of the prominent Eastern companies have already declared their willingness to adopt the classification, so its adoption is almost certain, though the date for putting it into effect may be postponed.

WHY the Eastern trunk lines are permitted to discriminate against oats and in favor of corn by charging a higher rate for transporting the former is difficult to understand. From the standpoint of the railroad companies the higher rate should be on corn, as it is the most valuable. It may be that they think the discrimination is excusable on the ground that oats are much lighter and a hundred pounds takes up more room in the car than a hundred pounds of corn. However this fact does not excuse the discrimination, for the amount put in cars of same capacity does not vary much. A number of discriminations of similar nature are made by the railroad companies,

all of which should be stopped. Grain shippers can well afford to spare the time to organize strong associations, fight these discriminations and defend their interests in other matters.

WHEN shipping oats do not fill the car so full that the roof bulges. It is against your own interest. Remember that the grain inspectors have to get into the car when it arrives at a terminal in order to properly inspect it. Chief Inspector Price informs us that a great many of the cars received at Chicago of late were so full of oats that the track inspectors could not get into the cars, so graded it according to the oats at the door and marked the certificate "subject to approval." The grade of many of these jammed-full cars of oats, when unloaded into the elevators was changed and some loads were placed in the next lower grade. The track inspectors have not time to unload your oats in order to inspect them, so if you want them inspected as they should be, leave room enough for the inspector to get inside the car.

THE South Dakota Railroad Commission has recently decided a case involving the distribution of cars. It was the case of the Union Elevator Company of Webster against the Chicago, Milwaukee & St. Paul Railway Company. The plaintiff charged the road with discriminating against Webster by furnishing competing towns near by with more than their proportion of cars, and with discriminating against the company by not giving it the proportion of cars due it. The commission found nothing to substantiate the first charge, but did the other, and ordered the company to live up to the law on this point. This case has hung fire a long time and elicited considerable interest among the grain shippers of South Dakota. They should organize a strong and active association, then would justice be measured out to them more promptly, and in larger quantities.

WE have always maintained that if shippers and receivers were to be charged for detaining cars the railroad companies should be charged for detaining shipments, and now the National Transportation Association has declared in favor of the same principle. At its recent meeting in St. Louis considerable time was given to the discussion of the car service rendered by the various railroad companies, and it was decided to make an effort to have Congress enact a law fixing the time to be consumed in the transportation between any two given points, and requiring the railroad carrier to pay shippers and consigners a demurrage of at least \$1 per day for time in excess of the specified transit. In view of the fact that railroad companies exact demurrage at many points at the rate of \$3 per day for failure of consignees to unload freight within forty-eight hours after arrival, it seems that the Transportation Association is letting the railroad companies off very easy. The plan will be submitted to Congress for action.

BRADSTREET'S report of the available stocks of wheat shows that on Dec. 1 the stocks east of the Rocky Mountains in the United States and Canada were 44,843,341 bushels, against 37,938,759 bushels on Nov. 1 and 26,799,769 on Oct. 1. On Dec. 1, 1889, the stocks were 44,455,455 bushels, and on Dec. 1, 1888, 51,394,546 bushels. During December, 1889, the stocks of wheat decreased several hundred thousand bushels, and continued to decrease during every succeeding month until September. The stocks of wheat on the Pacific Coast amounted to 12,361,933 bushels on Dec. 1, against 8,120,000 bushels on Dec. 1, 1889, and 6,476,967 bushels on Dec. 1, 1888. The stocks of corn on Dec. 1 amounted to 5,218,185 bushels, against 9,456,959 bushels on Dec. 1, 1889, and 9,313,454 bushels on Dec. 1, 1888. During November the stocks decreased nearly one-half, being on Nov. 1 10,014,087 bushels, and 12,311,098 bushels on Oct. 1. The stocks of oats on Dec. 1 amounted to 5,957,821 bushels, against 9,270,275 bushels on Dec. 1, 1889, 10,009,180 bushels on

Dec. 1, 1888, 6,863,307 on Nov. 1, and 7,326,370 bushels on Oct. 1. The stocks on Dec. 1, 1890, and on the first day of each of the three preceding months did not vary much. The stock of barley on Dec. 1 was 5,752,151 bushels, against 4,163,489 bushels on Dec. 1, 1889, 3,544,750 on Dec. 1, 1888, and 6,005,405 bushels on Nov. 1, 1890. The stock of rye on Dec. 1 amounted to 967,924, against 1,556,907 on Dec. 1, 1889, 1,995,269 on Dec. 1, 1888, and 1,223,443 bushels on Nov. 1, 1889.

SCREENINGS.

Whiskey in the original package—corn.

When the police raid a bucket shop the proprietors look pale.

Whenever grain takes a drop it makes the market unsteady.

The farmer and his poultry agree on one point. They both like a full crop.

"Caws and effect," said the farmer whose cornfield was cleaned out by crows.

It is now thought that the rye blossom will be adopted as the national flower.

Parched earth is not good for the growth of parched corn.—*New Orleans Picayune*.

Some pointers in the bucket-shop business prove to be disappointers.—*Boston Courier*.

The crow ought to be a good chiropodist—he has had so much experience as a corn extractor.

Few men sow their wild oats without getting more or less rye mixed with them.—*Atchison Globe*.

The bucket (shop) that goes too often to the well is liable to get broken.—*Minneapolis Journal*.

There are no "game laws" protecting "bears," but they never had a jollier season.—*Chicago Inter-Ocean*.

Isn't it queer that a winter wheat harvest always occurs in the hottest part of the summer.—*Duluth News*.

Most boards have the grain running but one way. In the board of trade the grain runs either way.—*Light*.

Never make love in a corn field. Remember that corn has ears, and is easily shocked.—*Kinderhook Rough Notes*.

Teacher—Of what does the world consist? Boy (whose father is on the Board)—Of "Old Hutch," wheat and corn options.

A grain dealer in Kansas bought a lot of stones in a lot of No. 2 wheat, and claims it was caused by the McKinley Bill.

There is scarcely any danger of anybody stealing the Chesapeake and Ohio Canal. It has a plenty of locks.—*Frederick Times*.

If the wives of grain dealers desire to have good-natured husbands they should buy the AMERICAN ELEVATOR AND GRAIN TRADE for them.

Last year it took just as many bushels of corn to buy a yard of silk as it will take yards of silk this year to buy a bushel of corn.—*Atchison Globe*.

Teacher—"What is a storage battery?" Ex-messenger Boy (after reflection)—"The thing that knocks all the profit out of holding grain in store."

A man can have only one past, but he is not limited in the matter of presents, and he can have all the futures he can manage to buy.—*Rochester Post*.

A man can have only one past, but he is not limited in the matter of presents, and he can have all the futures he can manage to buy.—*Rochester Post*.

Vienna has a corn fair in progress. The statement of the American crop will probably exceed the wildest expectations of the chiropodists.—*Rochester Post-Express*.

There is an inmate of the Georgia State Lunatic Asylum who imagines, in his insanity, that he is a grain of corn. He will not go into the yard, fearing the chickens will eat him.

An exchange says that a man named Corn was married to a lady named Wheat, in a church at Creston, and the choir stunned the audience present upon the occasion by singing, "What Shall the Harvest be?"—*Olweon Register*.

The phrase "I acknowledge the corn" originated with a slave in the South. He was charged with stealing corn found in his possession. Having a sack with him he was also charged with stealing that. His reply was: "No, sar. I 'knowledge de corn, but I ain't gwine to 'knowledge de sack."

CHICAGO AND NORTHWEST GRANARIES CO.

The first ordinary meeting of the shareholders of the Chicago and Northwest Granaries Company, limited, was held in London recently Mr. H. Seton-Karr, M. P., presiding.

The chairman made an address, in which he said: I had a great opportunity when I went to America last Easter of seeing nearly the whole of the company's property, and also of making the acquaintance of our local managers. I traveled something like 1,000 miles in the company of the general manager of the Chicago & Northwestern Railway, and saw sixty-two out of the seventy-five houses which belong to us, and I also saw the country in which they lay. I may say that not only have we three elevators but we have also seventy-five country houses, all of which fully come up to the description given of them. They are good houses and good elevators, well situated on the Chicago & Northwestern Railway, and they are thoroughly fitted for the nature of our business. I may also say our local managers are men in whom I believe we may place the fullest confidence. They are men whose credit is absolutely good and unstained in any respect whatever. They are men of the highest personal reputation and of the highest business reputation, and I think the shareholders may rest entirely satisfied that in their hands, so far as the local management is concerned, their interests will be thoroughly well safeguarded. With regard to the nature of the business, I may say shortly that it is simply the purchase and storage of grain, chiefly wheat. We also deal by way of accessory in all kinds of grain, such as oats, barley, flax and seeds, but wheat is the chief. Against these stores we make sales for future delivery as the market may warrant. It is absolutely necessary in a business of this kind to have men of special qualifications—well trained for the business—men who have been brought up all their lives to the business. They know when and how to buy, and when and how to sell. It is, of course, in the purchase and sale of grain that we make our profits. There is one thing I should like to call to your notice. It is the fixed rule of our managers never to speculate in wheat. We never "carry" wheat, that is we never purchase without selling the grain purchased, either for immediate or future delivery. This is a fixed rule in our managers' policy; it is a rule to which we shall steadfastly adhere, despite any temptations whatever to the contrary. It means that we shall always carry on a safe and legitimate business, and that we shall lose no money in that direction. [Applause.] This is a rule which is supposed to be kept by all grain men, but as a matter of fact it is not always adhered to by the managers of other grain businesses. We, however, intend to adhere to that policy.

Our houses spread over 1,200 miles of country. We have three on the Chicago, St. Paul & Kansas City line, but the majority are on the Chicago & Northwestern Railway. They embrace the country 300 miles east and west between the Mississippi and Missouri Rivers. They practically run through the wheat district of Minnesota and South Dakota; they practically run through the heart of the great wheat belt of the Northwest. This is an important matter, because it affects the profits on our grain business very much. I may say that in South Minnesota only about one-half the land is broken up. It is an older agricultural country than South Dakota, but the people go in more for mixed farming, and the wheat area is not quite so large relatively as it is in South Dakota. South Dakota is a new country, with only one-third broken up and two-thirds remaining for cultivation. All men think that the wheat area will steadily continue to increase. South Minnesota is a fine country; somewhat better in some respects than South Dakota, but it is better adapted for mixed farming and stock raising. But South Dakota is a very fine country; its future is all before it in my opinion. The only thing that prevents it from being the finest in the world is that its rainfall is a little uncertain; but it is the opinion of scientific men that as the country is gradually broken up the rainfall will become steadier and increase. In spite of exceptional seasons, when the crops are not so good as one might expect, yet in the long run we expect that the wheat growing industry of the West, in which our houses are situated, will still continue to increase. Our company owns the whole of the stock of the two American companies. These two companies declared, as you will see from our revenue account, a profit to July 31 of £19,793, and also, after providing for depreciation, paying interest on borrowed capital out there—providing for debenture debt and sinking fund for the redemption of debentures—there remains a balance of £13,925 available for dividend here, which sum we recommend should be divided as we have stated in the report, viz., by paying a dividend of 8 per cent. on the preference shares and 10 per cent. on the ordinary shares, leaving £1,333 3s. 7d. to be carried forward. I may say at once that the profits of the American companies are not so large as we at one time anticipated. Last year the crops in the Northwest partially suffered by drouth, and unfortunately it affected South Dakota and the west portion of the country where a number of our houses are situated. The result of this shortness of grain crop did not become apparent until the last six months of the year. It is very hard to tell exactly—the country is so large and the conditions so widespread—how the business is going to turn out. There is another important reason why our profits were not so large. We have practically been deprived of the use of our working capital this last half-year for this reason, that our company was brought out in October—a little later than was anticipated. Of course, it took a little time to get the money

in from our shareholders. The money market was a little tight, and the consequence was we did not get a large bulk of our capital until the spring of this year, and during the whole of the six months of our financial year—1889-1890—our local managers were deprived of their working capital from London to which they had looked forward. Before their business was transferred to the London company they had a certain amount of working capital which they had used without charging any interest on it, but of course, when they sold their business, their working capital was withdrawn. As you know, in the western country of Minnesota, the rates of interest are something like double what they are in England, and therefore we had to pay a sum of £15,000 for the use of our working capital this year. We had to pay £7,000 or £8,000 more for the working capital than we shall have to pay again, and it is absolutely certain we shall have on that score alone a sum of £7,000 or £8,000 to the good which we did not have in last year's revenue. Now, I may say that a few months ago, when the directors saw how things were going, they entered into negotiations with the vendors to meet them in a fair and liberal spirit, with the result that they have taken certain payments on their own shoulders. They took £3,000 of interest charged in America, something over £4,000 for interest on purchase money, and £2,400 of the London administration expenses, making a total of something like £10,000, and by these concessions we have been able to propose the dividend contained in the report. As I have explained, we have now the use of our London working capital, which will save some £7,000 or £8,000 in the ensuing year. In addition, we have moved, on the recommendation of our local managers, our chief office from Rochester to Minneapolis. This will save \$5,000 a year, including a single item of \$2,500 formerly paid for a private wire from Minneapolis to Rochester. We have, in addition, a further source of economy. The Chicago Board find themselves too busy to go from Chicago to Minneapolis to look after the business of the company, and as they desired to be relieved we have passed a resolution, with their consent, terminating the existence of the Chicago Board. We have this as a source of economy, because the Board would probably have cost us £1,000 a year. Now I come to the London administration. The articles of association provide that £2,700 should be given to the directors for their remuneration. Well, for the future, I may say that the directors propose very largely to reduce this sum. We have the London administration expenses reduced from over £3,000 to a sum of £1,100, giving a saving of over £2,000 a year. You will thus find, gentlemen, if you follow the figures that I have endeavored to lay before you, that in a future year we may reckon to absolutely save £10,000 or £11,000 a year. The American companies will be able to declare a considerably larger profit—nearer £30,000 than £20,000—and we shall not have to set off so large a sum in administration. I think, therefore, I am justified in saying that we may look to the future with a fair amount of confidence. I can only repeat that we have men on whom you can rely; our houses are well situated, and given good grain crops, I, for one, look forward with confidence to the future. Under any circumstances, gentlemen, I trust you will believe that the business we possess is a sound, good, and progressive one.

CORN IN NEBRASKA.

Prime says that the huskings show the corn crops of Iowa, Missouri, Kansas and Nebraska are all falling below former estimates. Feeders are paying from 40 to 55 cents per bushel for old corn throughout this whole region. Such counties in Nebraska as Saline, Clay, Hamilton, Butler, Gage, York and Seward will not average over eight bushels per acre; and a conservative estimate of the yield of the state is ten bushels per acre.

There is but little old corn left, the supply having been sold close under the prevailing high prices.

Eastern Nebraska stations which in 1889 shipped 1,500,000 bushels, on this crop will not ship a single bushel, and are buying in Iowa now to ship in to farmers for feed.

There is an urgent demand for corn to go West out of Nebraska at higher prices than it will pay to ship East.

"Nebraska has the poorest corn crop of any state in the corn belt. Already it is importing corn for home consumption, and as the season progresses this fact will assume larger proportions. Missouri and Kansas are also very short of corn, the South taking what little these states have to offer. Feeders all over the corn belt are actually paying to day higher prices for corn than it is selling for either in Chicago, Omaha or Kansas City. The old corn seems to be exceedingly well cleaned up. I think the country will be greatly disappointed as to the movement of the new corn toward grain centers this winter. The large receipts of hogs at the present time show more plainly than figures the shortness of the corn crop. Kansas and Nebraska report that they are already looking abroad for good oats for seed. Farmers in every state are holding their oats for feed and seed the coming season."

The latest estimates as to the Indiana wheat crop make the average yield the lowest for many years. It is only nine and a half against eleven and a half in Illinois, and twelve and a half in Ohio. The new state, Washington, shows the best average yield of wheat, about twenty-three bushels per acre. How long such a yield will last depends on whether Washington farmers will profit by the experience of their Eastern brethren in the exhaustion of the soil.



Memberships in the Chicago Board of Trade are selling at \$1,100 to \$1,125.

Tickets of membership to the New York Produce Exchange are selling at \$800 and \$850.

W. R. McNiven is furnishing Chicago call board quotations to the Buffalo Merchants' Exchange free of charge.

The Winnipeg Grain Exchange held a meeting Dec. 5 to discuss freight rates with representatives of the Canadian Pacific Railway.

Two memberships in the Minneapolis Chamber of Commerce were recently sold at auction, one bringing \$290 and the other \$292.

The Toronto Board of Trade met recently to discuss the scarcity of cars in Ontario. This scarcity has for many weeks troubled the grain exporters.

The board of managers of the New York Produce Exchange is trying to discover a plan to keep the price of memberships up to \$1,000 or above. A surplus of memberships has been bearing the price down.

The Board of Trade of Port Arthur, Ont., desires to have a public grain weigher appointed at that place, but the Winnipeg Board of Trade gave an unfavorable opinion, as under the law, a weigher could not issue certificates of weight.

The windows of the trading room of the Chicago Board of Trade have been soaped of late to prevent quotations being signaled from the floor to the sidewalk for the benefit of bucket shops. The latter get the figures in spite of this precaution.

The National Board of Trade met Dec. 8 at New Orleans. Seventy-five delegates were present. George M. Howe of Chicago was selected to preside during the session. The report of the committee on representation and extension showed that there were 1,171 commercial organizations in the country comprising 234,000 members. Among the subjects discussed were the credit system, Interstate Commerce act, uniform grading of grain, the Butterworth Bill, silver coinage, improvement of the Mississippi River and the appointment of United States Shipping Commissioners.

POSSIBILITIES OF CORN.

The possibilities of the yield of the corn crop are wonderful to contemplate. When we compare the average crops raised with the large yields that have occasionally been obtained, the pressing need of improved methods of dealing with this crop in order to secure returns somewhere near its capabilities, is strongly impressed upon our minds.

The average yield per acre of corn for the whole country in a good corn year like that of 1888 was only 26.3 bushels per acre. In Maine the average was only 19.3 bushels; in New Hampshire 22.6; in Vermont 24.3; in Massachusetts 30.1; in Ohio 32.5; in Indiana 34.5; in Illinois 35.7; in Kansas 26.7. Many good farmers often obtain fifty, sixty, seventy, or even eighty bushels of corn per acre, and find such crops far more profitable than smaller yields. But such yields do not illustrate the full capabilities of this crop; J. Barnard of New Hampshire raised 160 bushels per acre; H. Norton of Ohio raised 168 bushels per acre; D. W. Dickey of Pennsylvania raised 164 bushels per acre; Dr. Packer of South Carolina raised 200 bushels per acre; W. F. Young of Alabama raised 217 bushels per acre; D. Petit of New Jersey raised 263 bushels per acre. The prize for the best acre of corn raised in this country in 1888 was given for a yield of 255 bushels per acre.

With such yields as these before us what shall we say of an average yield for the whole country of only about twenty-six bushels per acre? Does it not look as though our agriculture needed improving? With even the large yields already attained the full limit of capacity of the corn plant undoubtedly has not been reached. Dr. Sturtevant in his experiments in corn culture succeeded in demonstrating to some extent the wonderful possibilities that lie within the range of possible attainment as regards this plant, by showing that at most of the nodes or joints of the corn stalk there is developed a miniature ear; if we examine a field of corn at the time when the leaves that encircle the corn push out from the joint we shall find on unfolding them that a tiny ear with its visible rows for corn has been formed at almost every joint. Dr. Sturtevant succeeded in starting twenty-three of these ears on one stalk, and developed seven of them to maturity, besides many bunnies! What shall we say of the capabilities of such a plant! What shall we say is the limit of its possible yield? What a field of improvement and development is open to the ambition of experimenters! No enterprising agriculturist need sit down in despair because there are no more worlds to conquer, no more honors to attain, but let him be up and strive to bring out all there is in the possibilities of this wonderful corn plant; when he produces a plant that will produce twenty-three perfect ears on one stalk then perhaps the limit will be nearly attained.—Massachusetts Ploughman.

WATERWAYS

One hundred and twenty-five grain carrying vessels are in winter quarters at Chicago.

The fleet of vessels engaged in the commerce of the Great Lakes numbers 2,055, and is valued at \$58,128,500.

The Chicago Seamen's Union at a recent meeting passed resolutions protesting against the new shipping law.

The grain cargoes of the canal boats frozen in on the Erie Canal, have been transferred to cars for shipment by rail to New York.

A lift lock, weirs, etc., will be constructed at Morrisburg on the St. Lawrence River, and the Rapide Plat Canal will be deepened and enlarged.

Preliminary work has been commenced on the Hennepin Canal at the mouth of the Rock River. Fifteen surveyors are locating the dams and locks.

A new line of steamers is to be established between Galveston, Tex., and South American ports. A company with \$50,000,000 capital will be incorporated.

A new channel has been dug between Duluth and Superior, saving eight miles and shortening the time between the places one hour. It was formally opened Nov. 23.

The Canadian commissioners have examined the Erie Canal with a view to its bearing on the extension of the Trent Valley Canal between Georgian Bay and Lake Ontario.

Six hundred men will be kept employed all winter in the construction of the Chignecto Ship Railway, which is being constructed between the St. Lawrence and the Bay of Fundy.

The New York state canals were closed Nov. 30. More than 100 grain and lumber boats are frozen in. The boats have not made much profit this season because of delays in getting loads.

It has become a regular business for heavy draft grain boats to lighter a part of their cargoes at Port Colborne, and after passing through the Welland Canal, to load again at Port Dalhousie.

The Pennsylvania Canal Commission will report to the coming Legislature a bill for the construction of a ship canal from Lake Erie to the Ohio River. The cost is estimated at \$23,000,000.

The bottom of the St. Lawrence River at Quebec has, in the course of twenty years, been raised 37 feet by the ballast thrown out of ships arriving to load lumber. Harbor improvements are now necessary.

The whaleback barge 107 with a cargo of 95,000 bushels of wheat, struck a snag in the Sault Ste. Marie Canal Nov. 26, and sank. Captain McDougall pumped out a part of the wheat, and the boat continued her journey.

The Western Reserve delivered at Buffalo recently 95,483 bushels of wheat, 780 bushels less than her bill of lading. It is understood her owners will refuse to pay for this large shortage. She loaded at four houses at Duluth.

Secretary Windom has ordered an investigation of the charges that vessels passing through the Welland Canal to American ports are discriminated against. The Canadian Government remits a part of the tolls to vessels which go to Montreal.

Twenty-three vessels, aggregating 16,765 tons, were launched on the Clyde River in Scotland during July. Fifteen vessels with a tonnage measurement of 17,668 tons were launched on the Great Lakes in that month according to Lloyd's register.

A canal is about to be dug across the state of Florida, from St. Augustine on the east coast to Cedar Key on the west, passing through Orange Lake. It will be 117 miles long and 28 feet deep. The Florida Ocean & Gulf Canal Company has the work in hand.

The steamer Western Reserve recently loaded and cleared from Duluth with a cargo of 96,269 bushels of wheat, the largest ever taken from that port; 75,001 bushels were taken from the Lake Superior Company elevators and 21,268 bushels from the elevators of the Union Improvement Company.

The canal at Sault Ste. Marie was completed in 1855 and cost \$999,802.46. The construction company in which Samuel J. Tilden and Horatio Seymour were prominent, took as payment 750,000 acres of land. In 1881 the state of Michigan gave the canal to the United States which has since locked both American and Canadian craft through, free of charge.

The president of the Lake Shore & Michigan Southern R. R. Company says: "There is a permanent agreement between the trunk line, all-rail lines and the lake lines that rates shall be lower by the lake routes in summer than by the all-rail routes, but the lake lines hereafter will keep rates up to a point where the all rail lines can get some of the business. The lake lines will make more money on a

smaller volume of business, while the all-rail lines will have some business assured them." Railroad officials may talk and declare they have things fixed, but there are too many tramp steamers on the lakes to permit of a combination on rates.

Duluth shipped during the season of navigation in 1890, 13,874,707 bushels of wheat, 1,130,954 bushels of corn, 1,608,794 bushels of oats, 128,279 bushels of barley, 35,777 bushels of flaxseed, and 2,452,660 barrels of flour; against 13,143,719 bushels of wheat; 1,782,205 bushels of corn, 88,940 bushels of oats, no barley, 29,175 bushels of flax seed, and 2,050,473 barrels of flour in the corresponding period of 1889.

The Mussel Shoals Canal in the Tennessee River, 195 miles below Chattanooga, has been completed at a cost of \$6,056,000. This improvement opens up a large territory in Eastern Tennessee and Northern Alabama and Georgia. The canal is 16 miles long and contains eleven locks, each 60x300 feet. One feature is a steel aqueduct 860 feet long, 60 feet wide and 5 feet deep, which carries the canal across the mouth of Shoal Creek.

The Great Lakes have had many names. Lake Superior was called Grand Lac, Tracy, Nadounia and Superior. Lake Michigan was at first Illinois. Lake Huron has been called Michigan, Karegnondi, Quatoghi and Huron from the Indian tribe of that name. Lake Erie was also named from a tribe of Indians. It was called Felis, Du Chat, Cadaragna and Okswego. Lake Ontario, 200 years ago was St. Louis, Frontenac and Katarakui.

Work has been begun on the most formidable piece of excavation on the Nicaragua Canal. It is a solid rock cut about thirteen miles from the Atlantic end of the canal. A great deal of dredging has already been done in the low land from the shore inward. The climate is agreeable, the health of the surveying and working parties good and the progress made thus far equals expectations. The engineers confidently predict that the work can be completed in four years.

E. L. Corthell, C. E., has taken up the matter of ship canals between Chicago and the ocean. Several routes have been selected, surveys made and data collected. Of the several routes one embraces a ship railway from tide-water on the Hudson to Oswego on Lake Ontario, and another ship railway from Toronto to Georgian Bay. Another plan is to deepen the Welland Canal and the St. Lawrence River. A ship railway across Southern Michigan connecting the upper ends of Lakes Michigan and Erie is also under consideration. A syndicate composed of Chicago, Montreal and London capitalists is back of the scheme.

Captain Wilson, of the Nyanza, says he came near leaving 2,000 bushels of her cargo in the elevator at Duluth. This wheat had been weighed for the boat, but not run in, although the spout had been removed. This goes to show how easily mistakes can be made at that port. The Nyanza had 76,000 bushels of Canada wheat shipped in bond. This is believed to be the first bonded cargo ever carried from one American port to another. As her hatches were sealed at Duluth by the Government officials and were unsealed by similar officers, it would be interesting to learn whether she could be held for a shortage.—*Marine Record*.

The canal season of 1890 has not been a profitable one according to the owners and agents in this city. Boatmen attribute this state of affairs to the delay in waiting for grain in Buffalo. The boats have had to lay off there from two to five weeks, and men and mules had to be paid for all the time. The boats now have to take their turn in Buffalo in getting cargoes, and sometimes there are 300 to 400 boats there. Owing to the way in which grain has been coming this way recently only about ten or fifteen boats a day have been loaded. The trouble is that the grain is held back in Chicago, and the speculators will do this as long as they are able. They say the canals must also be improved. They must be bottomed out, and all the locks must be lengthened on the Erie.—*Journal, Albany, N. Y.*

The San Francisco Produce Exchange reports the amount of flour and grain remaining in California Dec. 1 as 118,000 barrels of flour, 12,169,000 cents of wheat, 1,616,000 cents of barley, 61,000 cents of oats, 174,000 sacks of beans, 303,000 cents of corn and 37,000 cents of rye. The wheat exports for the week ending Dec. 6 were 450,000 cents.

The Illinois State Department of Agriculture furnishes the following in regard to wheat: "The area seeded to winter wheat is estimated at 8 per cent. larger than in the fall of 1889, when the area seeded was 1,705,458 acres. On this basis the total area seeded is about 1,850,000 acres. The December condition of the growing crop is a little below a seasonable average, being about 98 per cent. for the state.

Two weeks ago we published a letter from a Nebraska subscriber which indicated the result of investigations by the Iowa and Nebraska Grain Buyers' Association. This week we have this information from the same source: "The Grain Buyers' Association has all the returns now in and complete, resulting in an average of 16½ bushels of corn per acre for the entire country." We are not advised as to whether this is to be regarded as applicable to area planted or area harvested, after abandoning a great extent of planted ground in Kansas and Nebraska.—*Cincinnati Price Current*.

ITEMS FROM ABROAD

The estimates of experts on the British wheat crop vary widely.

A heavy wheat harvest is expected in Australia; it will be two weeks later than usual.

Austro-Hungary is sending but little wheat or flour to England. Austria has absorbed a large part of Hungary's surplus.

California wheat has been selling in Liverpool nearly 5s. per quarter above the lowest prices in each of the last six years.

India shipped from April 1 to Dec. 10, 19,600,000 bushels of wheat, against 18,748,000 bushels for the same period of 1889.

The United Kingdom during the first ten months of 1890 imported 1,462,896 quarters of linseed against 1,757,030 for the same period of 1889.

During the first nine months of this year Germany imported 2,530,000 quarters of wheat, against 1,814,000 quarters for the same time last year.

The shipments of wheat from Hungary during August, September and October were 12,080,000 bushels, against 4,064,000 bushels during the same three months last year.

It is reported from Bremen that stocks of rye are small in the consuming districts, with few offers of imports. There is no demand for American corn because of the rise in price.

Russia shipped during the ten months up to Oct. 27, 1890, 88,472,000 bushels, against 96,504,000 and 103,536,000 bushels for the same periods of 1889 and 1888 respectively.

Russian wheat in England is 7 to 8s. per quarter dearer than it was at its lowest price in 1887. This season's Roumanian and South Russian wheat is not quite up to the samples furnished.

Wheat shipments from Russia exceed expectations. Fine wheat is scarce, but the inferior sorts are very abundant. The stock at Odessa is below the quantity held there in the two previous years.

Japan's rice crop is much better than was expected. An average crop is 320,000,000 bushels. Last year's crop was a failure. The wheat harvest is not up to the average, which is 32,000,000 bushels.

The English grain markets are quiet, having been adversely affected by the financial troubles in England and America, and also by the increased supply from quarters which were credited with scarcity.

The imports of rape seed into the United Kingdom for the ten months of 1890 ending Nov. 1, were 179,865 quarters, against 333,052 quarters and 199,756 quarters for the same period of 1889 and 1888 respectively.

Owing to the lack of roads the price of wheat varies very much in different parts of Persia. At the south end of the Urumia Lake wheat sells for 10s. per 1,000 pounds, while in Tabreez the same quantity commands £1 12s.

The French wheat markets were recently strengthened by the passage of a bill by the Government for the reconstitution of the stock of breadstuffs in the fortified towns. Another cause was the poor condition of the home-grown wheat.

In the nine months preceding Oct. 1 France imported 24,890,000 bushels of maize, against 14,943,000 in the same time last year, and 11,040,000 bushels in 1888. The new duty of 14½ cents per bushel has had the effect of decreasing imports lately.

The Portuguese Government has been importing flour from France and selling it to the people in order to get around the millers, who shut down their mills in retaliation for the Government's placing the importation of wheat in the hands of a monopoly.

The German Government is very seriously considering the question of encouraging the importation of corn from America. It now buys largely from Russia, but in case of a war with that power their supply would be cut off; hence the Government has deemed it best to cultivate the trade with America.

The spring wheat received at Chicago in November, 1890, amounted to 2,991 cars, of which 1,339 were No. 2, 1,642 were No. 3, 178 were No. 4, and 12 cars no grade, against 4,057 cars, of which 2,724 were No. 2, 974 No. 3, 329 No. 4, and 31 cars no grade, for the same month of 1889.

J. T. Templer, who runs about a hundred elevators along the Santa Fe road in Kansas, informs the *Kansas City Star* that the flies are doing great damage to wheat in Kansas. They are now farther west than they were ever before known. Mr. Templer says that with all his facilities for buying corn, his houses do not contain more than 10,000 bushels which is not sold to be delivered. Mr. Templer has not shipped a car of corn to the Missouri River since about July 13.

PRESS COMMENT.

COMMERCE DIMINISHING.

The fall in bar silver has increased the volume of Russian and Indian exports, but has not done so to the extent expected by the market. The quantity of wheat, linseed and rapeseed new on passage from our Indian possessions would appear to indicate a diminishing commerce with the United Kingdom.—*Mark Lane Express.*

TROUBLE FOR VIOLATORS.

There is much satisfaction expressed on 'Change with the action of the courts in regard to the rebates given certain shippers. Looks as though the Inter-State Commerce Commission had a full hand, and some trouble ahead for violators of the law. In trade, one man's dollar ought to be as good as the other fellow's.—*Chicago Daily Business.*

UNIFORM WEIGHT FOR GRAIN.

The different weights and measures used on the grain markets of Great Britain have really no justification whatever in the present age. They are relics of a time when the absence of railways, telegraphs and other means of easy communication made each market town a "law unto itself." Nowadays a multiplicity of weights and measures means nothing but a multiplication of labor in mental or paper arithmetic, which labor is so much waste of mental energy.—*The Miller, London.*

PRICE OF CORN.

Corn prices are in excess of one-half the value of wheat, and on natural conditions this is above its usual relative price. But it is becoming more and more evident that the stock of old corn is light. The receipts demonstrate this. The prices paid for feeding in the interior demonstrate it. If the old stock is nearly exhausted, and the government estimates of the new crop and annual home consumption are correct, this country will be short of corn before the year is over.—*Toledo Market Report.*

WHEAT IN MANITOBA.

It is no doubt a pleasure to a patriotic Manitoban to tell that the Northwest has this year raised a crop of wheat aggregating at least 15,000,000 bushels, but it is only wisdom to admit that owing to a wet fall and other unfavorable circumstances never before experienced in the country, one-fourth of this aggregate is so badly damaged as to be unfit for milling purposes, or rather unfit to be used in making the class of flour usually expected from Northwestern wheat.—*Winnipeg Commercial.*

WHEAT IN ENGLAND.

The continued strain in the money market is at length commencing to affect the commercial markets in Manchester, Glasgow and Liverpool. As far as the grain trade is concerned the conditions for weathering a storm could not be more favorable. Stocks of grain are quite moderate both in this country, at sea and abroad; merchants have had a good twelve months' trading, and last and best prices are distinctly low—a fall of 5s. per quarter would be an impossibility, a temporary decline of 2s. would hurt no one.—*Liverpool Corn Trade News.*

LITTLE TO FEAR.

While it is far from perfect, still the United States has the best elevator system in the world. The inspection, grading and the facilities for handling the wheat crop of the Northwestern states is much more perfect than that of any other country. When we consider the crude and cumbersome methods employed in harvesting and handling grain in other countries, the American grain farmer has little to fear of competition, if he will keep pressing forward in the line of progress and improvement.—*Northwestern Farmer.*

VISIBLE SUPPLY OF BARLEY.

The reported visible supply of barley is a myth. There was, no doubt, at the commencement of the barley season that over 1,000,000 bushels was brought forward on the books without verifying the amount. Then again, two-thirds of the barley on the lakes and canals counted in the visible has been sold to arrive. And again, more or less reported in the visible, is now in malt. And again, thousands of bushels in the elevators, counted in the visible has been sold to malsters and brewers, and never will come on the market except in the way of malt or beer.—*Albany Journal.*

A FAVORABLE SIGN.

As a sign of the times we may note that a milling firm writes to *The Miller* of London, Eng., announcing that it has erected a roller mill in connection with its flour mill for the conversion of Indian corn into high class products for human consumption. The American people could afford to subsidize a dozen such mills in Great Britain as missionaries and educators of the people in the use of high grade articles of corn goods. The money would all come back to us; and the people of Great Britain and of

Europe would add to their diet an article which is to-day the cheapest food in the world as well as one of the best and most nutritious.—*American Miller.*

GRAIN BUYERS' ESTIMATES.

The grain buyers who have lately given the western corn production unusual attention are some of them disputing the figures of statistician Dodge in his measuring of the crop practically at 20 bushels per acre, or to be accurate 19.9. The trouble with dealers, experts who work together for a certain end, is that they usually arrive at conclusions they are paid for finding. It makes a difference with estimators perhaps, whether they are sent out to bring in 17 bushels or 23 bushels, in the results they obtain. Dodge is not infallible but he ought to be disinterested at least.—*Minneapolis Record.*

LAW AND LITIGANTS.

Contract—Sale—Bailment.

In the case of Woodward et al. vs. Boone et al., recently decided by the Supreme Court of Indiana, it appeared that wheat had been hauled by the appellee to the appellant and sold. When the wheat was delivered, however, the price of wheat had fallen, and the appellee was not satisfied to sell at the lower price, but put the wheat in railroad cars to await an increase in price. The court held that the transaction was a sale and not a bailment.

Unauthorized Sale of Commission Goods.

The Supreme Court of Errors of Connecticut has decided that when goods are consigned to a firm to be sold on commission, the price and terms on which they were to be sold being specified, the agent is liable to the owner if he sells them for less than he was directed. He is liable for the difference between the price made by the owner and the price he sold them for, less the commission on that amount, to which interest thereon from the time the sale was made must be added.

Shipped at Carrier's Risk.

The Supreme Court of Nebraska has decided that where the agent of a railroad company explains to a shipper the difference in the rate between goods shipped released, and those shipped at carrier's risk, and the shipper desires them shipped at carrier's risk and tenders the freight at that rate, he is not bound by the clause in a bill of lading subsequently delivered to him, shipping the goods released, and he may recover from a connecting line for any damages which occur in transit.

Sale of Goods by Sample.

In order to recover damages for goods sold by sample which turn out to be inferior, upon delivery, to the sample on which they were purchased, the mere fact that the loss to the buyers by reason of claims made against them by their customers, and the cancellation of contracts is more than the price of the goods purchased, is not enough. The amount of such claims and value of such contracts as well as the validity of the claims and cancellation must be shown.—*Ogden v. Beatty, Supreme Court of Pennsylvania, 20 At. Rep. 620.*

Use of Invention Before Patented.

Revised statutes of the United States provide that one who has purchased or constructed, with the knowledge and consent of the inventor, a newly invented machine before the application for letters patent has been made, may continue to use it after the patent is granted, and this is no infringement of the patent. Where an inventor constructs and puts in operation his machine for the use of another before he makes application for a patent, by that act he exempts that particular machine from operation of the patent giving him a monopoly.—*Double Grain Shovel Company vs. Flint, Supreme Court of the United States, 11 Sup. Ct. Rep. 8.*

Binding Force of Carriers Customs Upon Shipper.

Where merchandise is shipped by water, the dangers of navigation, fire and unavoidable accidents, being excepted from the liability of the carrier, the shipper assumes the liability for all perils of navigation incident to the usual route of the carrier between the points of shipment, and if it is the usual custom of the carrier to deviate from the direct route between the points of shipment, the limitation in the bill of lading covers accidents happening during such deviation, although this custom was not known to the shipper.—*Hostetter v. Park, Supreme Court of the United States, 11 Sup. Ct. Rep.*

When Title Passes on Sale of Grain.

When a sale is made of a certain number of bushels of grain to be taken from a large bulk of which they are a part, the title does not pass until that sold is separated from the rest. Where there is a contract of sale of personal property, and anything remains to individualize and identify the particular property intended to be sold, such as counting, weighing, measuring, or separating from a larger mass or bulk, no title passes to the purchaser, such as will maintain in his favor an action of trover. This is

for the simple reason that the particular part of the property or chattels contracted to be sold and delivered cannot be ascertained by precise identification.—*Warten v. Strane, Supreme Court of Alabama, 8 South. Rep. 231.*

Speculation Not Gambling.

In January, 1884, the Board of Trade commission firm of H. W. Rogers & Bro. sued Samuel G. Magill of Fargo, N. D., for \$3,500, the amount alleged to be due on a speculative transaction. Magill fought the case with great stubbornness and a great deal of attention was attracted to the case by reason of the Dakota man's defense that the deal was a gambling transaction and that therefore the plaintiffs could not recover. The jury took this view of the case and returned a verdict for the defendant. A new trial was granted and the Dakota speculator was knocked out and Rogers & Bro. given a verdict for the full amount of their claim.

Note—Wagering—Contract.

In the case of Schmucke vs. Waters et al., recently decided by the Supreme Court of Indiana, it appeared that ten bushels of oats of the actual value of 30 cents or 40 cents a bushel were delivered by one party to the other upon an agreement that the party receiving the oats should execute his note for \$100, the party furnishing the oats agreeing in turn to sell twenty bushels of oats to be raised and delivered by the maker of the note at the price of \$10 per bushel, both parties having full knowledge of the actual value of the oats. The court held that such a contract was void as between the parties to it, being a wagering or speculative contract and against public policy, and further held that where a note, which is commercial paper, originates in a transaction such as this, it is void as against public policy, or where it is obtained from the maker by fraud or false pretenses the burden of proof is upon the holder to show that he purchased it in good faith, without notice and in the usual course of business.

Policy Description.

The policy described the risk as a "steam power elevator building, and additions, with porches and platforms attached, * * *." One of the questions in the case was whether the policy covered a warehouse standing near the elevator. The warehouse stood within two and a half feet of the elevator building. The two buildings were attached together by two strips of boards—about twenty in number—nailed upon each building. The warehouse was used exclusively for storing grain, which was first received into the elevator and then spouted into the warehouse through two spouts which extended from one building to the other. The grain was taken from the warehouse by a conveyor running under the warehouse and elevator. No grain was received into or discharged from the warehouse except through the elevator, the warehouse being used for the storing of grain received into the elevator. Held, that the warehouse was included in description "elevator building and addition."

PERSONAL

Charles W. Tracy, late superintendent of the Minneapolis Elevator Company, has engaged in the grain and commission business in Minneapolis.

J. M. Whitney, owner of the Whitney Elevator at Rochester, N. Y., is something of a dog-fancier. He has a kennel stocked with many dogs of various breeds and the finest pedigrees.

Robert Lindblom, of the Chicago Board of Trade, went abroad last spring and returned lately. The quiet of Sweden, his native land, was not so attractive as the excitement of his Chicago business.

William L. Higgins, a prominent grain dealer of Indianapolis, Ind., went to Russia to study the institutions of that country and also to secure relief from the cares of business. Before he returned he had all he wanted of that land. The Russian authorities treated him as a nihilist and Anarchists are usually treated in that country, kept him under surveillance. Although he had a passport signed by the Secretary of State, yet when he arrived at St. Petersburg he was ordered not to leave the country nor to put up at any hotel. After being thrown out of hotels and driven from boarding houses, he finally escaped by bribing an official.

The visible supply of grain in the United States and Canada on Saturday, Dec. 6, according to the Chicago Board of Trade, was 24,569,743 bushels of wheat, 2,278,416 bushels corn, 3,320,007 bushels oats, 494,208 bushels rye and 4,607,933 bushels barley, against 24,523,604 bushels wheat, 3,134,446 bushels corn, 3,359,502 bushels oats, 570,183 bushels rye and 4,850,416 bushels barley on Nov. 29. On Dec. 5, 1889, the visible supply was 33,178,391 bushels wheat, 5,726,196 bushels corn, 4,869,923 bushels oats, 1,114,766 bushels rye and 2,774,233 bushels of barley.

ELEVATOR

GRAIN NEWS

A brewery will be built at Tampa, Fla.
 A brewery will be built at Springfield, O.
 Auburn, Ind., is to have a \$50,000 brewery.
 M. Stoner will build a distillery at Atlanta, Ga.
 Wilbur, Neb., has voted \$6,000 for a distillery.
 A starch factory will be erected at Canton, Dak.
 John O'Neil will build a brewery at Albany, N. Y.
 A cotton-seed oil mill is being built at Monroe, La.
 Fred Schelly will build a brewery at Norfolk, Neb.
 A. Reitz will build a broom factory at Corinth, Miss.
 A broom factory will be built at Corpus Christi, Tex.
 A 1,000,000-bushel elevator will be built at Richmond, Va.
 A cotton-seed oil mill is being erected at Manchester, Va.
 W. W. Coover, grain dealer at Republic, Mo., has sold out.
 L. F. Patillo has erected a broom factory at Maysville, Ky.
 A cotton-seed oil mill will probably be built at Flatonia, Tex.
 Howard & Childs will build a brewery in New York City.
 T. C. Lyman & Co. will build a brewery in New York City.
 Joseph Straubmuller will build a brewery at Philadelphia.
 Weisbrod & Hess are building a brewery at Philadelphia.
 Kolb Bros. will build a brewery at West Bay City, Mich.
 Kopitz, Malchers & Co. will build a brewery at Detroit, Mich.
 M. P. Phillips will build a cotton-seed oil mill at Lakeland, La.
 The Austin Mill Company has built an elevator at Sidney, Man.
 A malt house and brewery will be built at Ballston Spa, N. Y.
 A cottonseed oil mill will probably be built at Brownwood, Tex.
 O. P. McLain contemplates erecting a grain warehouse at Alert, Ind.
 Fischer & Hohenstein will build a brewery at Anacortes, Wash.
 A grain elevator will be built at Frankfort, Ky., by Chicago men.
 T. J. Smythe of Chicago, a small speculator in wheat, failed Nov. 15.
 A brewery will be built at Cheyenne, Wyo., by Cincinnati capitalists.
 E. O. Reilly has completed a 25,000-bushel elevator at Neepawa, Man.
 A linseed oil mill has been built at Rapidan, Minn., run by water power.
 The Berlin Weiss Beer Company has been incorporated at Detroit, Mich.
 R. C. Ennis is buying wheat at Neepawa, Man., for Dines & Cleveland.
 The Wm. Massey Brewing Company will build a brewery at Philadelphia.
 The McCormick Brewery Company will build a brewery at Boston, Mass.
 Alex. Mongeau, grain dealer of Montreal, Can., has made an assignment.
 Curley Bros., grain dealers at Wakefield, Mass., have dissolved partnership.
 The Indiana Brewing Company will enlarge its brewery at New Albany, Ind.
 F. R. Watts of Mandeville, La., will build a broom factory at Alexandria.
 Alex. Kerr is manager of the Martin, Mitchell & Co. elevator at Miami, Man.
 Sinclair & Co., grain dealers at Brandon, Man., have entered the fuel business.
 A grain elevator of 1,000,000 bushels' capacity, will be erected at Wichita, Kan.
 The Central Hay & Grain Company has been incorporated under New Jersey laws to do business in New York

city. Its capital is \$3,000,000, and it will manage the business of five firms.

A grain elevator will be built at Riverton, Ala., by J. A. Foote of Iuka, Miss.

Mr. John Boll of Saratoga Springs, N. Y., will erect a brewery at Granite Lake.

A grain warehouse has been moved on cars from Hubbard, Neb., to Claramont.

The Tacoma Starch and Glucose Company will erect a factory at Puyallup, Wash.

Pickens & Chamberlain, grain dealers at Powell, Neb., have dissolved partnership.

Buckley & Ross, grain dealers at Stromsburg, Neb., have dissolved partnership.

Levinson & Co., grain dealers at Spokane Falls, Wash., have dissolved partnership.

Manitoba farmers have delayed shipments of wheat in expectation of higher prices.

The Burleson County Oil Mill Company has been incorporated at Caldwell, Tex.

J. H. F. Sexton & Co., grain and feed dealers at Philadelphia, Pa., failed Nov. 26.

The Marengo Mill Company has sold out its grain and lumber business at Marengo, O.

Moscow, Idaho, wants a linseed oil mill to use the flax-seed which is a staple crop there.

Jehl & Co., grain and coal dealers at Melvin, Ill., have been succeeded by Bucholz Bros.

The Bourbon County Distilling Company has been incorporated at Ruddell's Mills, Ky.

F. B. Mackenzie, grain dealer, is building a grain and flour warehouse at Brandon, Man.

McBean Bros. of Winnipeg, Man., have their elevators ready for storing grain for the public.

A grain elevator will be built at Staunton, Va., by the Staunton Steam Roller Mill Company.

The Canadian Pacific road will erect twenty new grain warehouses along its lines in Manitoba.

The St. Louis Breweries Association will erect a brewery at St. Louis, Mo., to cost \$400,000.

Theodore Nathan, grain commission merchant at Kansas City, Mo., has made an assignment.

Lack of business has compelled the closing of the Northwestern Elevator at Fisher, Minn.

Robert Manford buys wheat at Morris, Man., for the Ogilvie Company's elevator at that place.

The syrup refinery at Davenport, Ia., manufactures 5,000 bushels of corn into glucose every day.

L. G. Graff, grain dealer of Philadelphia and member of the Commercial Exchange, failed Nov. 18.

The Cook County Brewing Company has been incorporated at Chicago, Ill., with \$250,000 capital.

Alexander, Kelly & Co., millers at Brandon, Man., have purchased the McLaurin elevator at that place.

The Dallas Elevator Company at Wichita, Kan., is extending its operations into surrounding territory.

S. H. Foss of Genda Springs, Kan., is having millet seed ground into feed at the Oxford Roller Mills.

The Duke of Marlborough is examining the elevators at Jersey City, N. J., with a view to investment.

H. A. Fuller, grain dealer at Tampa and Braidentown, Fla., has been succeeded by H. A. Fuller & Sons.

F. H. Ludwig, of Modale, Ia., has moved his elevator and is converting it into a first-class roller flour mill.

Threshing machines are still at work in some parts of Manitoba. A good deal of the late wheat is still standing.

The Iron Mountain Brewing Company has been incorporated at Iron Mountain, Mich.; capital stock, \$50,000.

The Jacob Portz Brewing & Malting Company has been incorporated at Hartford, Wis., with \$40,000 capital.

The Robert Smith India Pale Ale Brewing Company will rebuild its brewery at Philadelphia, recently burned.

J. A. Foote of Iuka, Miss., has organized a stock company to build a grain and feed elevator at Riverton, Ala.

An English syndicate has secured options on four breweries at Seattle and Tacoma, Wash., and Portland, Ore.

The new elevator of the E. M. Dickey Company at Pomroy, Ia., has been completed. I. T. Willis is manager.

Thomas Waters & Co., grain and commission dealers at Galveston, Tex., have been succeeded by Waters & Boyd.

It has been suggested that Fishkill, N. Y., on the Hudson, would be a good site for the erection of a grain elevator.

A man was caught stealing wheat out of the elevator at Ashton, Neb., recently, arrested and tried, dismissed and called back and fined, and afterward bound over to the district court. No one would go his bail, so he drew a

roll of money from his pocket and deposited \$60 with the justice to secure his bond.

The interest of J. M. Ulsh, in Ulsh & Troutman, flour and feed dealers at Harrisburg, Pa., has been sold out by the sheriff.

A new elevator and flour mill is being erected at Del Norte, Colo., to be run by water power from the Rio Grande River.

R. Wagner & Co., members of the Chicago Board of Trade, failed Nov. 17. Wagner had lost \$75,000 speculating in wheat.

Abner L. Backus & Sons, grain dealers at Toledo, Ohio, have been succeeded by the Abner L. Backus & Sons Company.

P. McGurn & Co., grain dealers and members of the Chicago Board of Trade, failed Dec. 12. Liabilities \$22,000, assets \$25,000.

The Arkansas Brewing & Ice Company has been incorporated to erect a brewery at Little Rock, Ark. It is the first in that state.

The Dougherty Freight and Grain Car Door Company has been incorporated at Quincy, Ill., with \$60,000 capital, to manufacture car doors.

A. L. Johnson of Pottawattamie County, Ia., has won the title of champion corn shucker of the state, having husked 140 bushels in ten hours.

Wright & Hill have recently completed a large linseed oil mill at Chicago. Geo. F. J. Hildebrand, M. E., of Chicago had charge of the work.

Fred Grunsell will build an elevator in Chicago to cost \$10,000. It will have a front of Collinsville pressed brick with Bedford buff stone trimmings.

An exhibition is to be held at Jamaica where the Canadian provinces will attempt to make a good exhibit of their grain, flour and manufactured goods.

The storage facilities at Port Arthur now aggregate nearly 7,000,000 bushels, of which over 6,000,000 are on the line of the Canadian Pacific Railway.

The Portage la Prairie Farmers' Elevator Company of Portage la Prairie, Man., recently declared a dividend of 8 per cent. for the year ended May 31 last.

W. A. Russell, owner of a grain elevator at Morris, Man., will buy grain for the Lake of the Woods Milling Company, shipping it through his own elevator.

Gude Bros., formerly of Minneapolis, have fitted up "Elevator Q" at Duluth, Minn., as a feed mill and will do business as the Star Elevator and Grain Company.

The Standard Elevator Company has been incorporated at Chicago, Ill. The capital stock is \$300,000, and the incorporators are Christoferson and Thomas Parker.

Wichita, Kan., advises report corn in good demand for Southern trade at 51 cents for new and 55 cents for old, also that none could be spared for the Eastern market.

The Minnesota & Dakota Elevator Company at Minneapolis, Minn., has amended its articles of incorporation, making itself liable for \$1,250,000 instead of \$500,000.

Although the Whitney Elevator at Rochester, N. Y., was enlarged some time ago, it has now more business than can be handled. An increase of capacity will soon be necessary.

Clark Bros. & Co.'s 40,000-bushel elevator at Manson, Ia., has been completed. It contains a 20-horse power engine and boiler, and machinery for cleaning grain and clipping oats.

C. J. Furer of Clay Center, Neb., owner of elevators at Verona, Clay Center, Fairfield, Spring Ranch, Molstein, Roseland and other points, failed Nov. 27 with large liabilities.

Martin, Mitchell & Co. have grain elevators and warehouses at Morris, Wawanesa, Altamont, Roundthwaite, Martinville, Somerset, Swan Lake, Mariapolis, Greenway station and Belmont, Man.

A San Francisco wheat shipper has recovered \$40,000 from the Oregon Railway and Navigation Company for failure to deliver shipments on time. The company has appealed to the California Supreme Court.

The sum of \$17,000 was realized by the sale of the damaged corn in the Wells Elevator at Buffalo, N. Y., which burned recently. Kennedy & Co., the purchasers are selling the corn at about 30 cents per bushel.

Three men at Jacksonville, Ill., recently tried to see how much corn they could shuck. The shucked corn was taken by them to Greenleaf & Baker's elevator in Alexander and measured. They worked eight hours and in that time one of the men shucked 127 bushels and 25 pounds.

W. W. Moore of Nashville, Tenn., has begun suit against the Tennessee Brokerage Association for \$9,875 and the McCrea Company for \$8,050, both bucket shops. The plaintiff claims that he lost the amounts sued for in transactions in futures carried on last summer with defendants.

The News of Carberry, Man., relates the following improbable story: "Farmer W. came to market with a load of wheat; the best price offered was 45 cents. W., not being satisfied with the price, started homeward, when he met a neighbor, who asked where he was going, and on being told, suggested that he turn around and ex-

change horses, which was agreed upon, the neighbor bringing the load back and receiving 75 cents per bushel."

R. T. Wilkinson of Cowling & Wilkinson, grain dealers at Chicago, has made an assignment. The firm had an elevator in Chicago and did a large grain business in Southern Illinois. Mr. Wilkinson is mayor of Mt. Carmel.

L. T. and H. P. Watson have begun suit against Charles E. Handy at Minneapolis, Minn., for \$1,640.75, which is due them on wheat deals. Handy's membership in the Minneapolis Chamber of Commerce has been garnished.

The Brooklyn Elevator & Milling Company has been incorporated at Brooklyn, N. Y., with \$50,000 capital. The trustees are Lowell M. Palmer, Henry U. Palmer, John H. Fort, James F. Bendoragel and Charles F. Havemeyer.

The Canadian Pacific Railroad is building a 500,000-bushel grain elevator at Richford, Vt. It is intended as a distributing point in the New England states for grain from the Northwest shipped over the Sault Ste. Marie & Minneapolis branch.

The Minnesota Supreme Court, in the case of the Farmers' Mutual Elevator Company, appellant, and G. E. Tarbell and others, has decided that a contract embraced in a receipt cannot be changed orally any more than if it were a separate instrument.

The November grain statistics show that the St. Paul road brought 738,315 bushels less grain and flour to Chicago than during the same month a year ago. Receipts by the Northwestern increased 684,900 bushels, and by the Illinois Central 658,012 bushels.

The Memphis, Tenn., cotton-seed pool, an offshoot of the Mississippi Valley trust, has been declared illegal by a Memphis court. Being illegal it could not maintain action against two delinquent members of the pool, the Planter's and the Panola Oil Mill companies.

The Manitoba Elevator Company has now three elevators in Manitoba, one each at Brandon, Wawanesa and Balder, on the Morris-Brandon line of the Northern Pacific. A fourth elevator will be built at Hilton. Thos. Nicol of Wawanesa, is manager of the company.

The American Hominy Flake Company of Yellow Springs, O., will build an elevator and oatmeal mill at Hammond, Ind., near Chicago, Ill. The capital is \$100,000, of which \$35,000 will be expended in buildings and machinery. The officers are J. H. Little, Asa Little and G. L. Spencer.

A. H. Thaxter & Co., grain and flour dealers of Bangor, Me., have completed their elevator at Greenville Junction. The building is 39x70 feet, and has a capacity of 25,000 bushels. It has close connection with the Canadian Pacific and the Bangor & Piscataquis railroads, and also with lake steamers.

The Farmers' Grain and Stock Company of Hooper, Neb., has purchased John Dern's grain elevator at that place. The officers of the new company are Herman Havekost, president; Andrew Linn, vice-president; Jacob Bodewig, secretary; John Mohr, assistant secretary; Christ Kroger, treasurer.

The H. J. Deal Specialty Company of Bucyrus, O., gives an original and handsome advertising photograph with every grain tester sent out. Those who have the tester but not the photograph, can secure same by writing for it. The H. J. Deal special memorandum book will also be sent to customers desiring same.

The price of wheat continues to drop every few days. The elevator is now only offering 44 cents a bushel, but the farmers' warehouse is paying 47. The different stations along the Spokane & Palouse branch are calling for about 200 cars a day, and they get from fifteen to twenty. It looks as though it was about time for the railroad officials to begin to get a hustle on themselves.—*Record, Spangle, Wash.*

The folly of resorting to litigation for the settlement of one's business has just received a forcible illustration. A farmer near Rushville, N. Y., several years ago sued a grain buyer of a neighboring village for a balance of \$48 due on a crop of barley delivered on contract. The buyer was beaten in justice court, and also in the higher courts, through which the case has been passing for several years, greatly to the inconvenience of both parties and many witnesses, but greatly to the profit of the lawyers. Recently the defendant paid the plaintiff \$348.50, the amount due him on account of the original debt and the costs that followed as assessed by the court. The above amount does not include the personal expense and lawyer's fees of the defendant.—*Miller's Review.*

The Canadian Pacific grain elevator at Richford, Vt., is built upon 96 stone piers, 7 feet square at base, 4 feet square at top, and 12 feet high. The elevator will be 151 feet high, 132 feet long and 90 feet wide, with a receiving capacity of 500,000 bushels or a little over 30,000,000 pounds. Above the piers the elevator is to be built of wood covered with corrugated iron so constructed as to be practically fire-proof. Directly above the piers are the largest bins, 12 feet square and 70 feet deep, extending over the entire first floor. The grain is taken from the cars to the top of the elevator in buckets arranged on the endless chain principle and then distributed by spouts into the various compartments. The power is supplied by a Corliss Engine of 175-horse power, in a building adjacent to the elevator, and a carload of grain containing 666 bushels, of 40,000 pounds, can be unloaded in seven minutes.

Fires, Casualties, Etc.

A grain store has been burned at Baltimore, Md. Loss, \$16,000.

A feed store was burned Dec. 6 in a general fire at Vandalia, Ill.

Two thousand tons of hay were burned Dec. 9 near Denver, Col.

Niblack & Son's grain elevator at Decatur, Ind., was burned Nov. 18.

Stevenson's brewery in Chicago has been damaged by fire. Loss, \$1,500.

C. G. Sprague, grain dealer and miller at Minden, Neb., has been burnt out.

The Union Transfer Elevator at Decatur, Ill., was recently burned. Insurance, \$12,000.

The seed warehouse of Price & Reed at Albany, N. Y., was burned Dec. 7. Loss, \$15,000.

P. A. Swartz's flour and feed store at Philadelphia, Pa., was burned Nov. 22. Loss, \$3,000.

Byron A. Gilbert, an old grain dealer of Medina, N. Y., was killed by a freight train Nov. 27.

J. S. Little, grain, hay and feed dealer at Brooklyn, N. Y., lost \$1,000 by fire in his office.

Alexander Davidson of Cartwright, Man., was killed recently by a fall in his grain elevator.

A. M. Woodward, of A. M. Woodward & Co., grain and lumber dealers at Odin, Ill., is dead.

John Hinton, grain dealer at Fort Wayne, Ind., was run over by an express wagon and killed Dec. 2.

Hippely & Son's brewery at Allegheny City, Pa., was partially destroyed by fire Nov. 4. Loss, \$5,000.

Robert G. Stevens, who was a member of the Chicago Board of Trade for twenty-five years, died Dec. 2.

A. Schlenk's brewery at Beloit, Wis., was burned on the morning of Dec. 2. Loss, \$2,000; partially insured.

Withers, Dade & Co., distillers at Henderson, Ky., have lost \$25,000 by the burning of their distillery. Partly insured.

Two hundred and fifty tons of hay was burned at Odin, Ill., in a barn owned by A. M. Woodward & Co., grain dealers.

The Fayetteville Oil Mill Company's cotton-seed oil mill at Fayetteville, N. C., has been burned. Loss, \$10,000.

The grain elevator of the Big Four railway at Sandusky, Ohio, was burned Dec. 11. Loss, \$40,000; insurance, \$30,000.

Kittle & Co.'s linseed oil works at San Francisco, Cal., were burned on the morning of Dec. 10. Loss \$200,000, insurance \$100,000.

William Davol, employed in E. A. Buck's grain warehouse at Willimantic, Conn., had three fingers of his left hand crushed in the elevator.

A grain elevator at Pearl, Mo., together with 10,000 bushels of wheat which it contained, was burned on the night of Nov. 18. No insurance.

The "North Dakota Elevator" at Elliott, N. D., was burned Dec. 11 together with 10,000 bushels of wheat. A spark from a locomotive started the blaze.

The large elevator of the St. Paul & Kansas City Grain Company at Roland, Ia., was burned Nov. 21, together with 15,000 bushels of oats and shelled corn.

B. C. Huffer's flour and feed store at Sauk Rapids, Minn., was burned Nov. 27. Loss on stock, \$800; insurance \$600. Loss on building, \$1,000; no insurance.

The "Pioneer Oatmeal Mill & Elevator" at Portage La Prairie, Man., owned by Johnson & Barclay, was burned on the night of Oct. 31. Loss, \$10,000; insurance, \$5,000.

The grain and flour warehouse of Young, Mahood & Co. at Pittsburg, Pa., was burned Dec. 5. The fire spread to their store from E. Maginn's cracker factory near by.

The grain elevator, freight rooms and office of the Chicago, Milwaukee & St. Paul Railroad at Omro, Wis., were burned on the night of Dec. 1. The elevator contained 6,000 bushels of grain.

The grain warehouse at Hawthorne Station, Ill., owned by neighboring farmers, has been destroyed by fire, together with its contents, over 12,000 bushels of wheat. Loss \$20,000, insurance \$7,000.

C. H. Bosch & Co.'s elevator at Cedar Rapids, Ia., was burned at 9:30 o'clock on the night of Nov. 22. The origin of the fire is unknown as the entire cupola was ablaze when discovered. The machinery had been

stopped only a few minutes before the fire was noticed. The building contained 196,000 bushels of barley. Loss on building about \$50,000.

The elevator and mills at Iola, Kan., owned by Thayer & Gilmore, burned on the night of Dec. 8, together with several hundred bushels of wheat and 6,000 pounds of flour. Loss \$10,000, insurance \$4,000. The cause of the fire is not known.

Stephens' grain warehouses at Madison, Cal., were burned by incendiary fires on the night of Nov. 25. Twenty-five thousand bags of wheat were burned valued at \$25,000, and uninsured. Loss on the two buildings, \$10,000; no insurance.

H. W. Briggs & Co.'s grain elevator at Taunton, Mass., was burned Dec. 1, together with 10,000 bushels of corn and 700 bags of meal. J. Paull & Co. lost 5,000 bushels of corn, insured for \$3,500. Total loss, \$28,000. Insurance on building, \$13,000.

The Harris Elevator in Burlington, Ia., leased by the Burlington Linseed Oil Co., collapsed Nov. 25. The entire west side fell out with a crash, dumping 30,000 bushels of flaxseed on the ground. The seed was quickly hauled away and safely stored. Loss on building, \$1,000; on flaxseed, \$100.

Matilda Oresch, a little 10-year-old girl employed in an elevator at Springwell's, Detroit, Mich., was sweeping up waste grain when her long hair caught on the shafting. As the hair wound around the shaft her whole scalp was torn off. She became unconscious and was taken to the hospital. The scalp was fitted on, but it was dead and refused to reunite. The surgeons then grafted a piece of skin from the side of her sister Emma on her skull, and she is now doing well.

The old Globe Elevator in Chicago, near the mouth of the river on its north bank, was burned Sunday, Nov. 17. The building was put up twenty-five years ago by David Wiley at a cost of \$40,000. It burned rapidly and was totally destroyed. The loss is, on building, \$15,000; on machinery, \$10,000, and on contents \$10,000; total, \$35,000; insurance \$6,000. Five carloads of buckwheat, 2,000 bushels of wheat and 5,000 bushels of oats in the elevator were also destroyed.

THE FLY IN WHEAT.

There have been rumors for some weeks that in sections of Missouri and Eastern Kansas the Hessian fly had taken advantage of the early season to attack the wheat plant. These rumors have been generally regarded as originating in the fertile brain of speculators who wished higher prices to rule for wheat, and were therefore discredited. From some of the other winter wheat states these reports are beginning to come, which shows pretty conclusively that there is a substantial basis for the rumors, and that the insect has appeared over a wide range of territory.

For the past two weeks correspondents in various parts of this state have been sending us reports of the condition of their fields. These reports, although few in number, come from thoroughly responsible parties, and from the best growing sections of the state. The counties reported furnish the bulk of the wheat crop, and in every instance the pest is reported present in large numbers. As the season advances and the work of the insect shows more clearly, these reports, we predict, will increase in number, and the injury will be found greater than now supposed. It must also be remembered that it is not the fall brood which does the most damage. It may do considerable harm, but the spring brood will be present in much greater numbers, and then the seriousness of this visitation will be understood.—*Michigan Farmer.*

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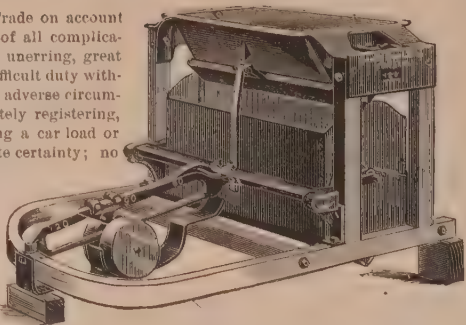
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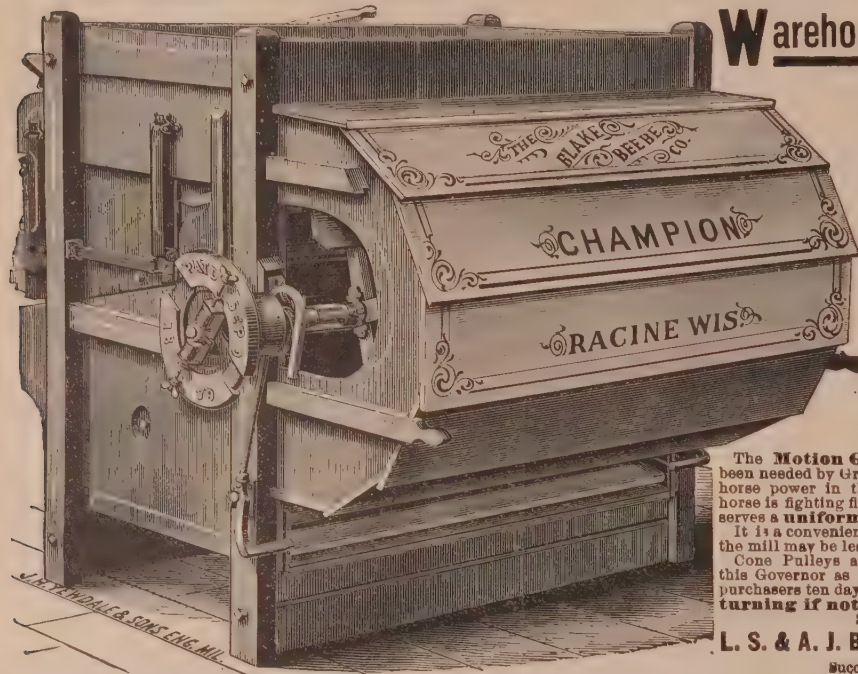
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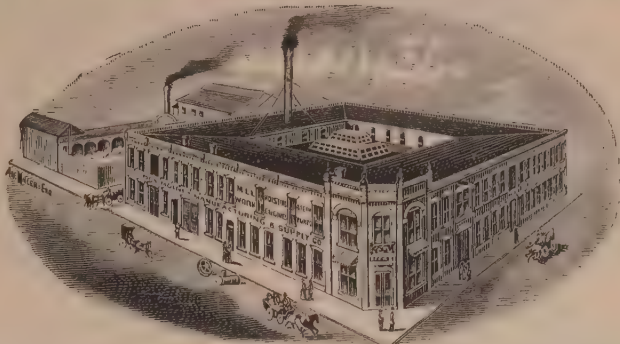
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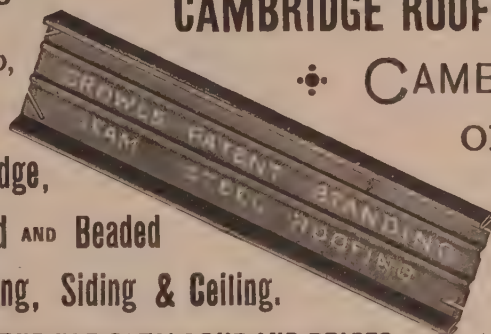
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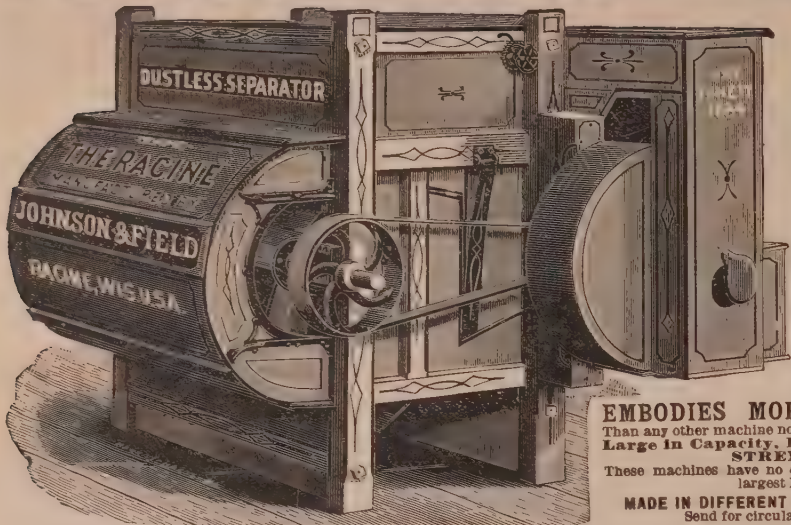
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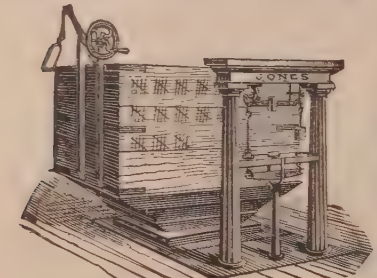
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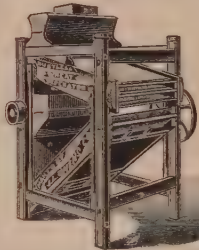
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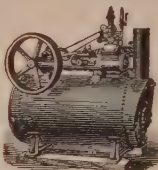


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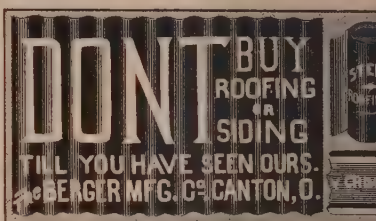
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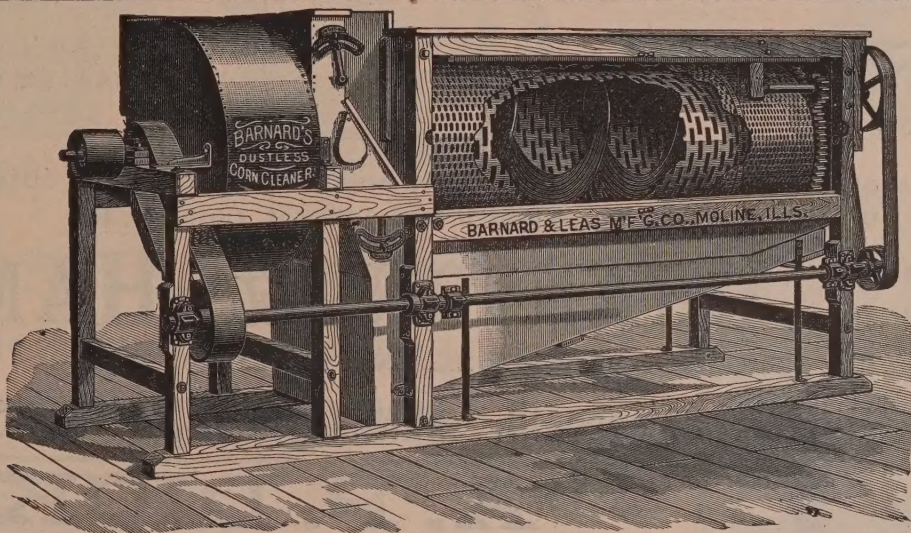
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BARNARD'S
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—AND—
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Especially adapted
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FULL LINE SPROCKET WHEEL PATTERNS.

Shafting, Pulleys, Hangers, Boxes, Link Belting, Elevator Buckets, Iron Elevator
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ELEVATOR SUPPLIES OF EVERY DESCRIPTION.

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GENTLEMEN—Inclosed find draft for \$130.00, payment invoice Sheller. Think we have the best Sheller in the market. We have two of your Shellers in use. Would put in the third one if it were not so late in the season. Think we could save corn enough to soon pay for another one. Anyone making inquiry about Shellers, REFER THEM TO ROYER & COON.

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GENTLEMEN:—We cannot too strongly urge you to investigate the merits of the above machines, well knowing that an investigation on your part will result to our mutual advantage.

In our **MONITOR SEPARATOR** we offer you a machine in every way worthy of a place in your elevators. This machine has never failed to elicit the highest praise from every one who has tried it.

It is simple in construction, light running and durable. Material the best that money can procure, and workmanship not excelled by any.

This separator has features far in advance of other machines for the purpose, and will do a class of work that is very gratifying.

They have been adopted in many of the leading elevators built during the last year, among which is the model 1,000,000-bushel house of Messrs. F. H. Peavey & Co., of Minneapolis, Minn., and the equally prominent house of the Santa Fe R. R. Co., both houses located near Kansas City, Mo.

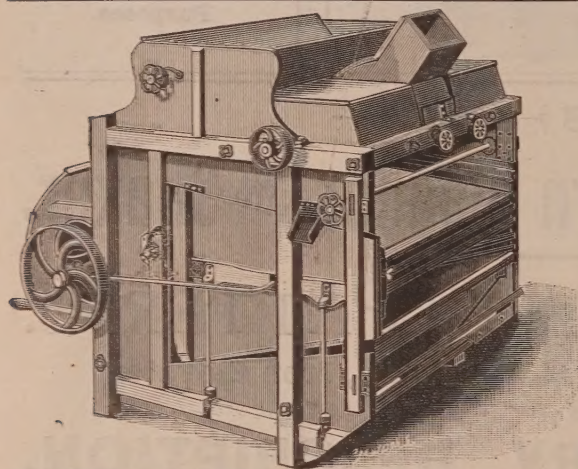
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Are highly recommended for use with horse power, and Warranted to give Better Satisfaction when run in this way than any other mills made.

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No Grain Buyer or Miller Can Buy Grain or Run Successfully without It.

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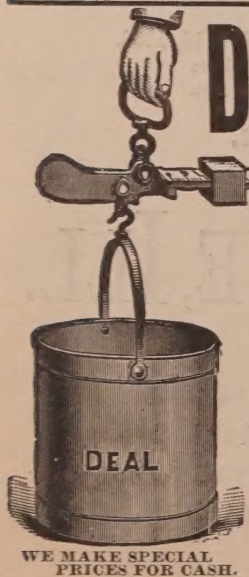
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DEAL'S CLIPPER BAKING TEST FOR FLOUR,
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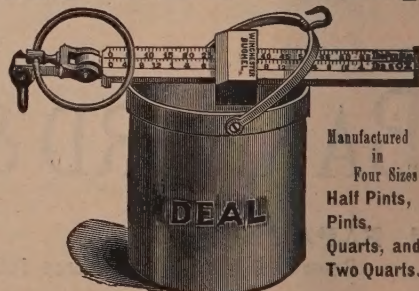
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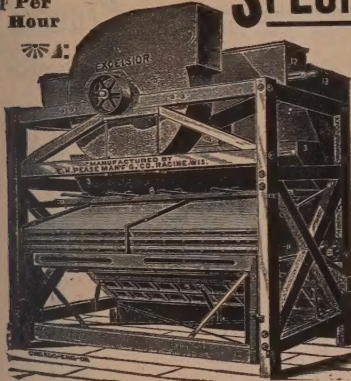


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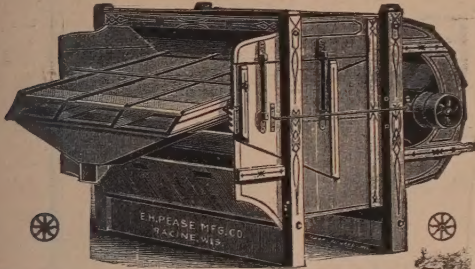
Four Sizes from 300
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SPECIAL GRAIN HANDLING MACHINERY

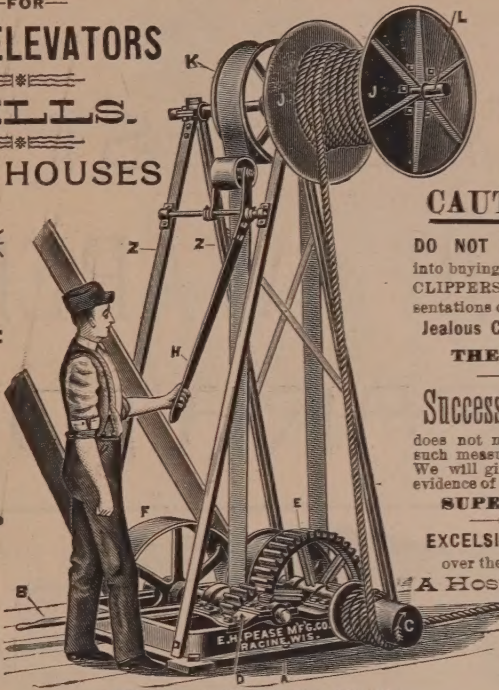
—FOR—
GRAIN ELEVATORS
MILLS.
MALT HOUSES
—AND—
BREWERS



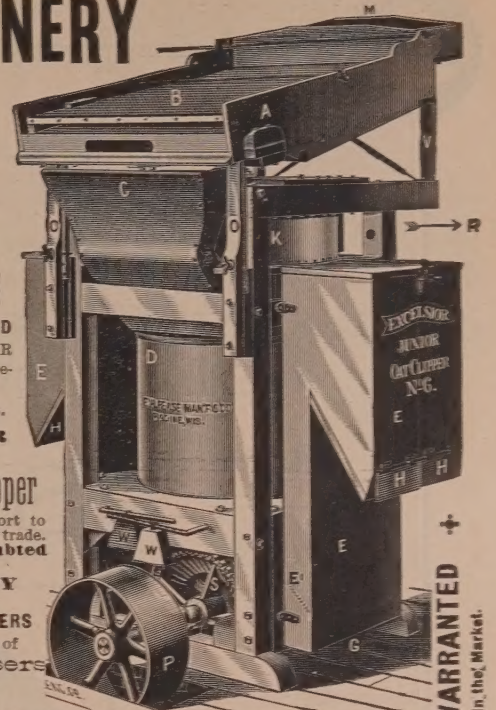
Excelsior Dustless Elevator Separator.



Several sizes, Styles and Capacities of End-Shake, and Side-Shake Warehouse Mills.



"HERCULES" POWER CAR PULLER.



"Excelsior Jr." Oat Clipper, Polisher and Separator.

CAUTION!

DO NOT BE DUPED
into buying INFERIOR
CLIPPERS by misrepres-
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Jealous Competitors.

THE MAKER

Successful Clipper

does not need to resort to
such measures to gain trade.
We will give Undoubted
evidence of the

SUPERIORITY

OF THE

EXCELSIOR CLIPPERS

over the signatures of

A Host of Users

THESE MACHINES ARE FULLY WARRANTED

To Excel any Other Similar Machines of like sizes in the Market.

PLENTY MORE TESTIMONIALS.

Letters similar to sample below, on hand for inspection of Buyers.

"Suppose you Write us for Particulars."

SENECA, ILL., May 8, 1890.

E. H. PEASE MFG. CO., Racine, Wis.

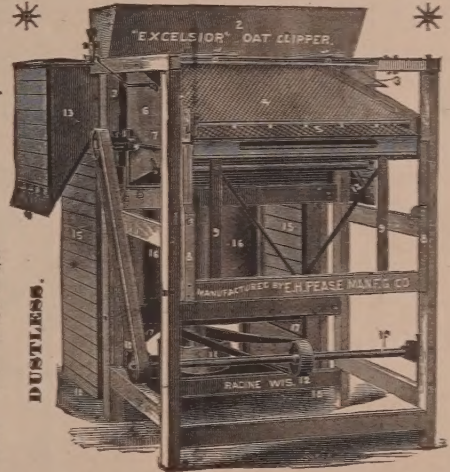
GENTLEMEN: In December, 1888, we bought one of your No. 8 "Excelsior" Combined Oat Clippers, Separators and Graders, and have clipped at least 250,000 bu. of oats with it without a cent of cost for repairs, and consider it one of the most valuable pieces of machinery in our elevator. Before buying, we examined other clippers in operation, but could find none we thought compared with the Excelsior in capacity or work. We have no trouble to raise the weight of oats anywhere from 3 to 10 lbs. per bu., and can change the grade while machine runs at full speed by moving the governing weights, upon the regulating levers. A few days ago we went to see a clipper work and judging from the work it was doing it is a total failure as an oat clipper.

We would not exchange our Excelsior Clipper for a 10-acre lot of ——— clippers. We have yet to see a machine that will come up to your No. 8 Excelsior in quality or capacity. Our machine has done better than you claimed for it and paid for itself long ago.

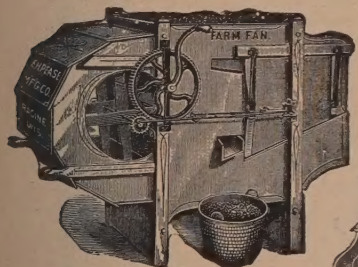
We tested our clipper a few days ago by clipping 3,500 bu. of oats by actual weight, with less than 1-2 lb. waste per bu. We also shipped two cars of oats from same bin to same commission merchant in Chicago, viz.: One car clipped and one car not clipped, we got 1-2 cents per bu. more for the clipped than the unclipped oats (1-2 cent per bu. covers cost of clipping and waste) ***** etc.

Yours truly,

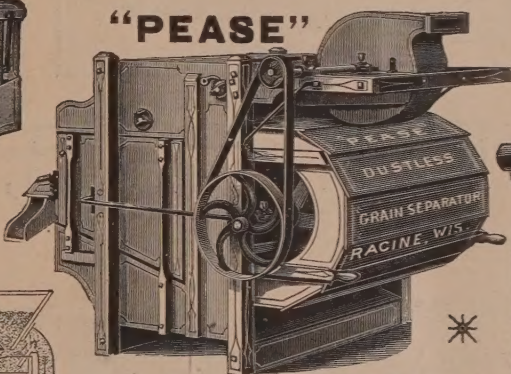
HOGAN & NEILSON.



"Excelsior" Oat Clipper and Separator.



ALL SIZES AND STYLES OF
"Pease" Farm Fanning Mills.



DUSTLESS SEPARATORS.

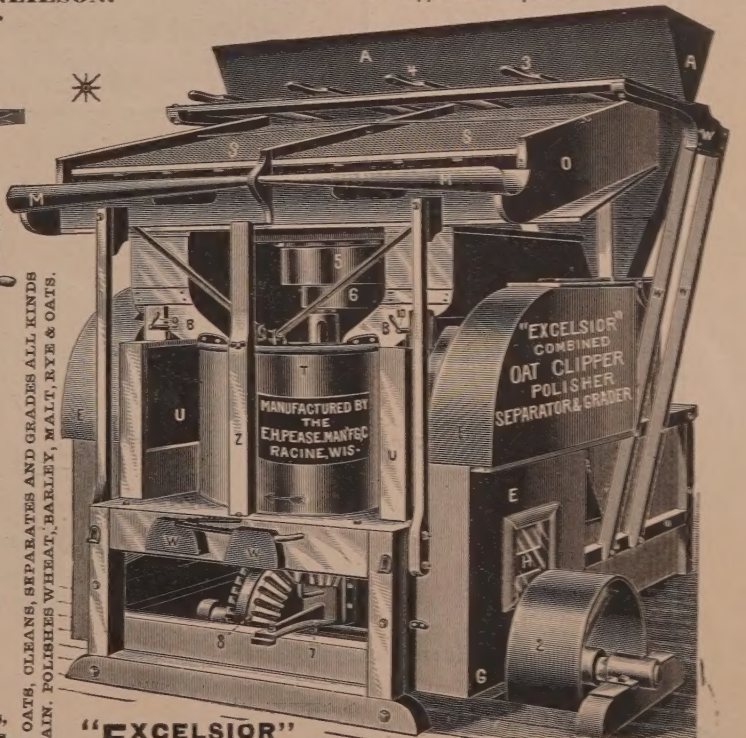
OUR SPECIALTIES

—ARE—

Oat Clippers,
"Pease" Farm Fans,
"Pease" and "Wells"
Warehouse Fanning Mills,
"Pease" Dustless Separators,

EXCELSIOR

Receiving Separators,
Grain Graders, Cleaners
and Polishers, Car Pullers,
Bag Trucks, Warehouse Trucks,
ELEVATOR SUPPLIES,
Etc., Etc.



"EXCELSIOR" COMBINED OAT CLIPPER AND SEPARATOR, GRADER AND POLISHER.

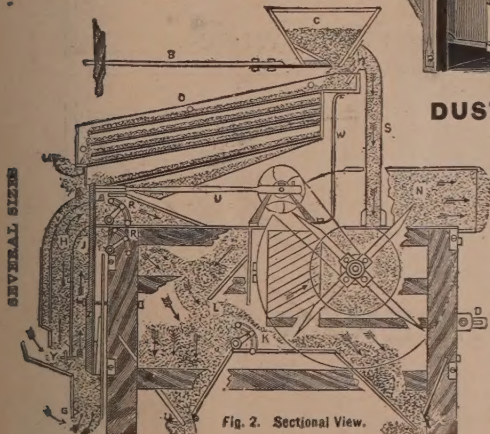


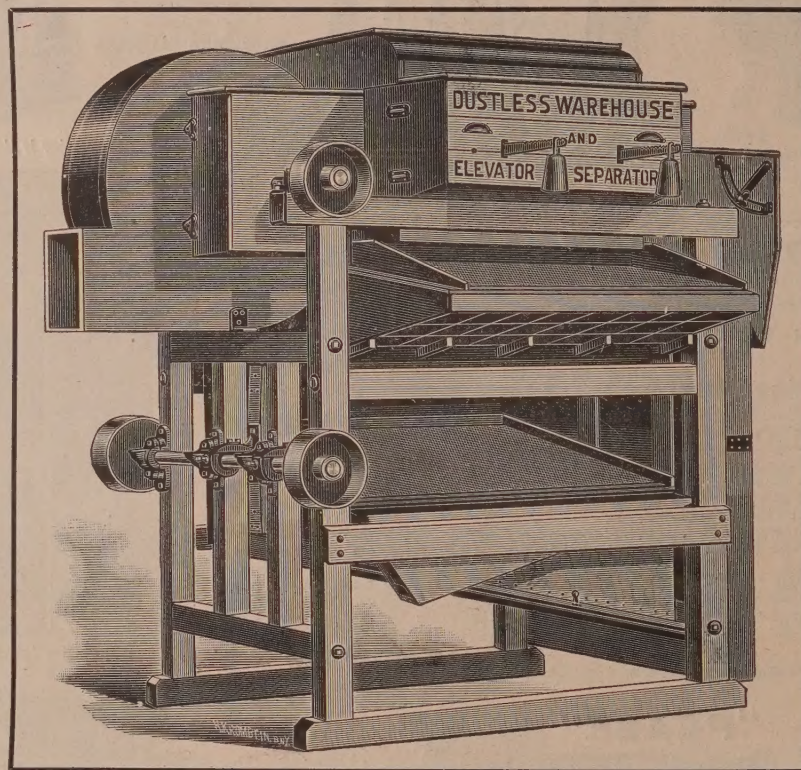
Fig. 2. Sectional View.

Excelsior Dustless Separator and Grader.

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.



THE BEST ELEVATOR ^{AND} WAREHOUSE SEPARATOR



IS THE "EUREKA."

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If you have the slightest doubt of the truth of this assertion, write
and we will remove that doubt.

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